DEVELOPMENTS IN THATTA

DISTRICT

1963-64



Developments in Thatta District



A District Council Publication

Developments in Thatta District

1963-64

Editor

Prof. Aftab Ahmad Khan,
M. Sc. (Alig.), W.P.E.S. (I).
PRINCIPAL, GOVERNMENT COLLEGE,
THATTA.

Published by

DISTRICT COUNCIL, THATTA

THATTA DISTRICT



AREA & POPULATION CENSUS — 1961				
	AREA IN SQ. MILES	POPULATION		
		TOTAL	URBAN	RURAL
THATTA DISTRICT	6933	361733	20887	340846
SHAH BUNDER TALUKA	1487	40824	—	40824
SUJAWAL "	288	45163	5086	40077
MIRPUR BATHORO "	270	52290	3015	49275
JATI "	1574	42280	—	42280
THATTA "	1481	75746	12786	62960
MIRPUR SAKRO "	1142	62001	—	62001
GHORABARI "	393	27218	—	27218
KETI BUNDER MAHAL "	298	16211	—	16211

THATTA DISTRICT AT A GLANCE

1. Area	..	6,933 Sq. miles.
2. Population	..	3,61,733 persons.
3. Density (per Sq. mile)	..	52 persons.
4. Sex Ratio (Females to100 males)	..	87
5. Literacy (Population aged 5 and over)	..	10.2 per cent.
6. Climate	..	Moderate.
7. Main Crops	..	Wheat, Rice, Barley, Maize, Gram, Oil Seed.
8. Main Languages spoken	..	Sindhi, Urdu, Baluchi.
9. Tribes	..	Baluch, Jokhio, Soomra, Samma, Saiyed, Memon, Khoja, Mirbahar, Hindu.
10. Economy	..	Mainly Agricultural.
11. Colleges and School—		
(a) College	..	1
(b) High Schools	..	6
(c) Middle Schools	..	13
(d) Primary Schools	..	502
12. Communications—		
(a) Metalled Roads	..	110 miles
(b) Railway	..	Karachi—Hyderabad Main Line.
13. Industries—		
(a) Large Scale	..	Sea Salt and Chemical.
(b) Small Scale	..	Carpet making, Silk weaving, (Hand Looms) Bidi Binding, Lungis (Scarves).
(c) Cottage	..	Mats, Glazed Pottery.
14. Important places	..	Makli Hills, the Jama Masjid Thatta, Banbhore, Jam Tamachi ji Mari, Tomb of Shaikh Jaji Turabi, Samui, Kalan Kot, Kalri Lake.
15. Administrative Division—		
(a) Sub-Division	..	2
(b) Talukas	..	7
(c) Mahalkaris	..	2
(d) Supervisory Tapedar Circle	..	19
(e) Union Councils	..	35
(f) Municipal Committee	..	1
(g) Town Committee	..	2
(h) Villages	..	556



Field Marshal Mohammad Ayub Khan,
President of Pakistan

"While there are severe limitations on our financial and economic resources, there is no limit to the resourcefulness of human nature and the creative energies which can be released by making the people use their gifts and their spare time for their own walfare. I hope that, as these basic institutions develop, it should be possible for them to take over more of their local problems of administration and development which are at present being taken care of by the Government."

(Field Marshal Muhammad Ayub Khan)



Malik Amir Muhammad Khan,
Governor of West Pakistan

"Let those who have more, ask on behalf of those who have less; let those who have less put forth their demands without rancour and envy; let us all be sure on one point—that no part of West Pakistan can really progress unless the other parts catch up with it. This can early be done if we think of West Pakistan as one indivisible whole."

(*Malik Amir Muhammad Khan*)



Mr. ABU NASAR, *SQA, CSP,*

Commissioner, Hyderabad Division

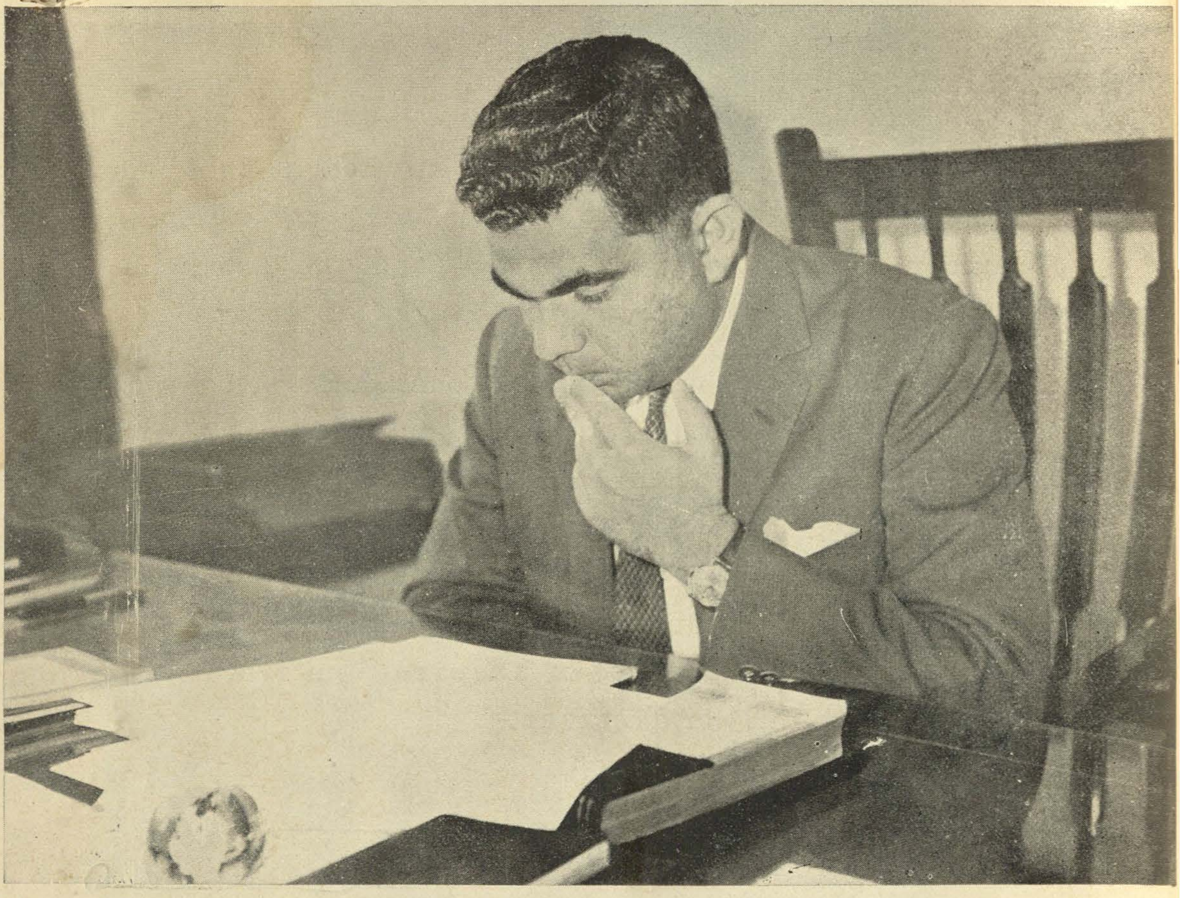
Commissioner's House.
Hyderabad.
Dated 30th March, 1964.

MESSAGE.

It gives me great pleasure to learn that the District Council, Thatta, is bringing out an Annual Number dealing mainly with the pace and progress of the development programme in the district.

Thatta is comparatively a backward district and the resources of the District Council are limited. Inspite of this handicap, the District Council has achieved a lot in various fields of activities. This Annual Number will not only indicate the volume of the work so far done by the District Council but will also serve as a source of inspiration for further development in the district.

(ABU NASAR), SQA, CSP,
Commissioner



Mr. SHAHJEHAN S. KARIM, *CSP,*

Deputy Commissioner, Thatta

Foreward

It gives me great pleasure to present the first official publication of the District, entitled "The Developments in Thatta District". The magazine is an outcome of the concerted efforts on the part of the district officers, contributors of the various articles and the Editor. The developmental activities of Thatta District have been comprehensively dealt with. It is a summary of what has been achieved so far in the field of development and what is planned to do in years to come to relieve the district from the stigma of backwardness. It is proposed to publish such a magazine annually with a view to keep the people informed of the development activities of the district.

It may be mentioned that the task of editing a magazine is always full of innumerable difficulties, handicaps, and hardships. Credit goes to Prof. Aftab Ahmad Khan, who proved worthy of his selection as Editor of the Pioneer Magazine with his untiring efforts, personal interest and hard labour, a full fledged magazine has come out in place of a pamphlet on Developmental activities as originally planned. The authors of various articles, the Superintendent and Manager (Works), West Pakistan Government Press, Karachi and the Editor deserve my personal commendations for their valuable contributions.

Shahjehan S. Karim, C.S.P.

Title page designed

by

S. MAHBOOB SHAH,
Chairman, Town Committee, SUJAWAL

Editorial

The idea of bringing out a pamphlet on the Developments of Thatta District was mooted out in a meeting of the District Officers held in November, 1963, with a view to give a short account of the different schemes and projects undertaken by the District Administration and the various tiers of Basic Democracies. Later on the idea developed into publishing a streamlined brochure, giving details of all the developmental works carried out in the district during the past few years in general and the financial year 1963-64, in particular. This was considered essential in view of the fact that the institution of Basic Democracies has made the people an active participant in the National Development programme, particularly the recently initiated Rural Works Programme, for which the Government has been kind enough to allocate necessary funds.

Thatta having been declared a notified backward area the entire Government Machinery from Provincial to District level has been put into gear to relieve the district from its backwardness. The pace of developmental work has recently been very much accelerated, under the able guidance and sound administrative control of Mr. Shahjehan S. Karim, CSP, who ever since his taking over as Deputy Commissioner of the District, has been working very hard with an ambitious programme to bring the district at par with any other developed district of the Province. The progress made so far has been very encouraging and Thatta has started gaining a new look in every phase of life. A detailed account of the various developmental works carried out in the District during the current financial year has been given in the article very kindly contributed by the Deputy Commissioner inspite of his multifarious activities and pre-occupations.

Thatta with its glorious past and conspicuous historical status, needed an introduction. The article on 'The Glimpses of Thatta' contains an account of the past glories of Thatta and a brief history of some of the important monuments which will prove informative. Miscellaneous information about Thatta in a nutshell has also been incorporated under the caption 'Thatta at a Glance', reproduced from the District Census Report for 1961, along with a Map of Thatta District for which I am grateful to the Ministry of Home Affairs, Government of Pakistan.

With a view to make the publication fully illustrated a large number of photographs have been included in the magazine. Major Aftab Ali Shah, Assistant Director, Basic Democracies, who has been very active in taking snaps of almost all the activities of the District, especially the activities of Basic Democracies, has very kindly provided a number of Photographs. I am thankful to him for his valuable contribution. I am also thankful to Mr. S. Mahboob Shah, Chairman, Town Committee, Sujawal, for preparing an impressive design of the title page, depicting the various phases of developmental activities carried out during the current financial year.

I take this opportunity to express my thanks to the various District Officers and other authors of the articles for their substantial contribution. I am grateful to the Director, Animal Husbandry Mr. M. A. Farooqi, Chief Engineer, Dawood Coal Mines for sending their articles and photographs. The Department of Archaeology and Bureau of Tourism deserve thanks for supplying necessary information which has been incorporated in the Magazine for those interested in Tourism.

I am highly indebted to Mr. Shahjehan S. Karim for his able guidance, valuable advice and encouragement at various stages of the compilation of the Magazine. I am also thankful to Mr. G. A. Mujaddidi, Superintendent, West Pakistan Government Press, Karachi, for providing all facilities, giving technical advice and taking personal interest in the printing of the Magazine. Last but not the least I express my deep sense of appreciation for the excellent cooperation and valuable assistance which I received from my colleague Mr. K. Y. Siddiqi, throughout the period of the compilation, proof reading and printing of the Magazine.

CONTENTS

DEVELOPMENTS IN THATTA DISTRICT 1963-64

SHAHJEHAN S. KARIM, C.S.P.
Deputy Commissioner
Thatta.

Introduction.

A new look has been given to Thatta District by speeding the development work in various fields during the current financial year, both by Local Councils and the Government. Negligible development work was done in the past years and no attention was paid to the rural areas of the district in providing basic amenities of life to the populace. Keeping this in view an ambitious development programme was chalked out and most of the schemes were started in right earnest which are either complete or are under completion.



Activities of the District Council.

The Thatta District Council had no office of its own and four or five rooms in the office of the Deputy Commissioner were being used for this purpose. A plan for the construction of an office building for the District Council at an estimated cost of Rs. 2,50,000.00 was made and Mr. Abu Nasar, SQA, CSP, Commissioner, Hyderabad Division laid the foundation stone of this building at Makli on July 31, 1963. This building will be completed by the end of this financial year. Besides having an Assembly Hall, offices for the Chairman, Vice-Chairman, Secretary District Engineer and the District Health Officer. it will also accommodate a new branch of the National Bank of Pakistan at Makli, a Drug Store and Canteen for the employees working at Makli.

The District Council also initiated many schemes in various Union Councils, *e.g.*, digging of wells, installing hand pumps, construction of dispensaries at Hillaya in Taluka Thatta. Buhara in Taluka Mirpursakro and at Mahal Keti Bunder, which have now been opened for the benefit of the residents of those areas. A technical workshop is also under construction in Taluka Jati which will start functioning from the next financial year. The District Council is also starting new Middle Schools in the district which are being constructed under the Rural Works Programme.

Rural Works Programme.

Thatta District is fortunate in getting an allocation of Rs. 14,90,000.00 under the Rural Works Programme for the development works in the Rural areas of the district. It is a new venture and entails constructional activity at a level not yet undertaken by the local councils. The Deputy Commissioner is the Project Director of the Rural Works Programme and this has given him a very challenging role to play as the Chief Development Officer of the Disrtict. It will enable him to increase the development activities in his district and also give him the opportunity to provide the basic needs to the people



Hand pump installed by Union Council, Chuhar Jamali.

in the rural areas. The Rural Works Programme is designed to fullfil four major objectives; (i) to reduce unemployment and underemployment (ii) to increase production (iii) to supplement the development efforts of the departments busy in large schemes and projects and (iv) to train local councils in the implementation of the development work.

The procedure for submitting schemes under the Rural Works Programme is very simple. The local councils determine their local needs and submit their schemes to the District Council which after discussing each scheme and finding out its suitability recommends it to the Commissioner for final approval. No scheme below Rs. 50,000.00 is sent to the Government or the Divisional Council for formal approval as it can be implemented by the District Council itself. There is no doubt that in the initial stages the local councils had to encounter great difficulties in planning their schemes as it was quite a new idea to them. However it is gratifying to note that they have started in the right earnest. More and more schemes are being submitted in view of the fact that they have now realised that the Government is keenly interested in the development activities and that it is not merely a paper work. Funds are made readily available and all possible steps are taken for the speedy implementation of the schemes. This has also developed a sense of competition amongst the various Union Councils. The Officers associated with the Rural Development Works Programme have also taken it as a challenge and are doing their best to speed up the works. This has given remarkable results so much so that most of the scheme have been implemented and the entire programme for the year 1963-64 is expected to be completed much ahead of the schedule.

Categories of Schemes.

The categories of schemes which qualify for implementation under the Works Programme are Schools, Scholarships, Dispensaries (Medical and Veterinary), Minor Irrigation Works, Fish Ponds, Rural Roads, Flood Protection Bunds, Small Dams, Minor Rural Water Supply Schemes *e.g* Wells, Tanks and Hand Pumps, Village Improvement and Sanitation Scheme, Minor Afforestation Schemes and Plant Nurseries, Soil Conservation, Community Buildings, Minor Drainage Schemes, Culverts, Low Cost Housing for Labourers and other Low Income Groups on Hiro Purchase System.

Project Committee.

A Project Committee has been formed for the implementation of the Rural Works Programme of which the Deputy Commissioner is the Chairman and the local member of the National Assembly, both the members of the Provincial Assembly, Chairmen of the selected Town Committee/ Union Councils, Executive Engineer Building and Roads, Executive Engineer, First Ghulam Muhammad Barrage Division of the Agricultural Development Corporation, the two Assistant Commissioners as Heads of their respective Sub-Divisions are members and the Assistant Director of Basic Democracies is the Member-Secretary of the Committee. This Committee meets every month, discusses the problems faced in the implementation of the works, the progress made and further requirements if any, are readily provided.

Impediments.

A brief summary of the schemes being implemented in Thatta District, allocations made to various Union Councils, allocations made in the vari-

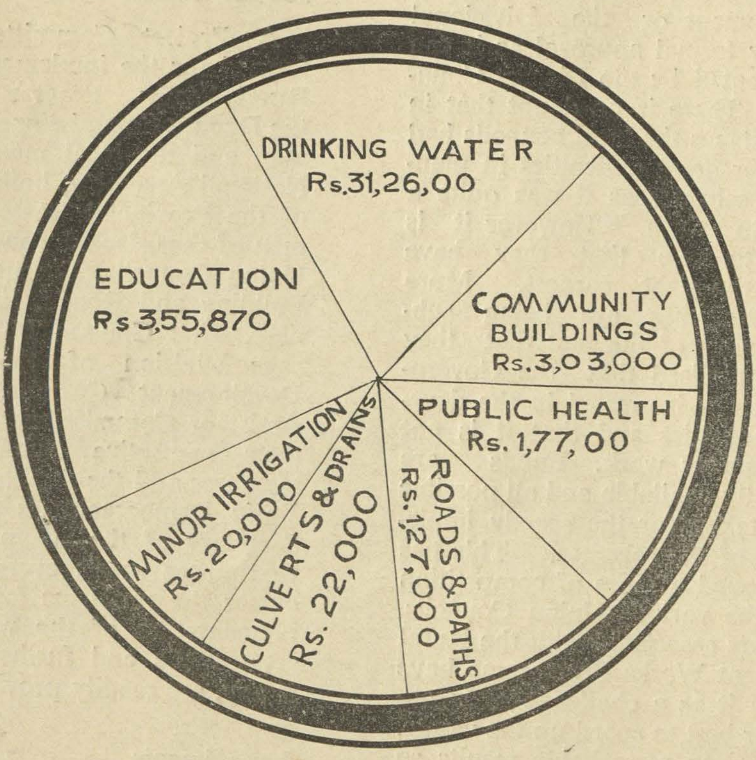
RURAL WORKS PROGRAMME

THATTA DISTT

Allocation of Funds Categorywise :-

1963-64

Total Allocation	Rs 14,90,000
District Council Schemes	Rs 3,50,000
PL-480 Schemes	Rs 10,50,000
Misc Contigencies	Rs 90,000



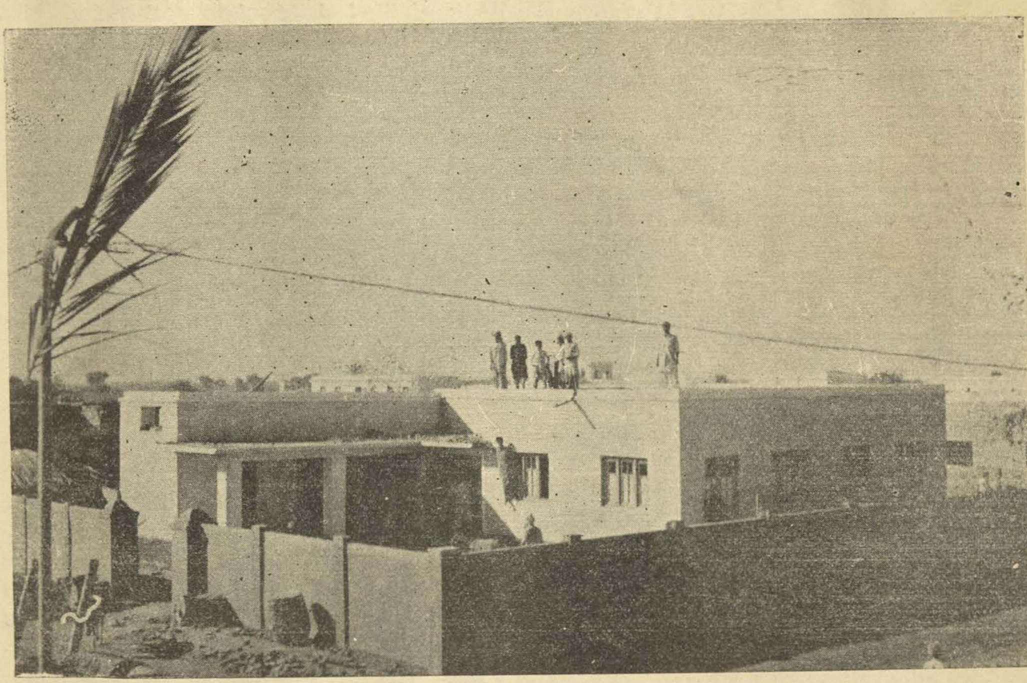
By

Major Aftab Ali Shah.

Assistant Director,

Basic Democracies,

Thatta.



Ladies Industrial Home Sujawal.

ous sectors, and progress made so far, can be seen in Appendix I of this Manual. Initially the Project Committee was faced with many problems such as the absence of technical know-how amongst the members of the local councils, shortage of technical staff, shortage of the building materials, communication and transport difficulties. These difficulties were overcome by facing them boldy and so far the progress has been quite satisfactory. The Rural Works Programme has given a new impetus to the development work and this is expected to prove an ideal method of community development through the elected representatives of the people

Annual Development Programme of the Government of West Pakistan, 1963-64.

The development activities carried out in various sectors can be summarised as below:

Education.

In Education Sector, a new building for the College at an estimated cost of Rs. 5,00,000.00 is expected to be completed very shortly. The building has a new design and gives an impressive look on Makli Hills. Two new

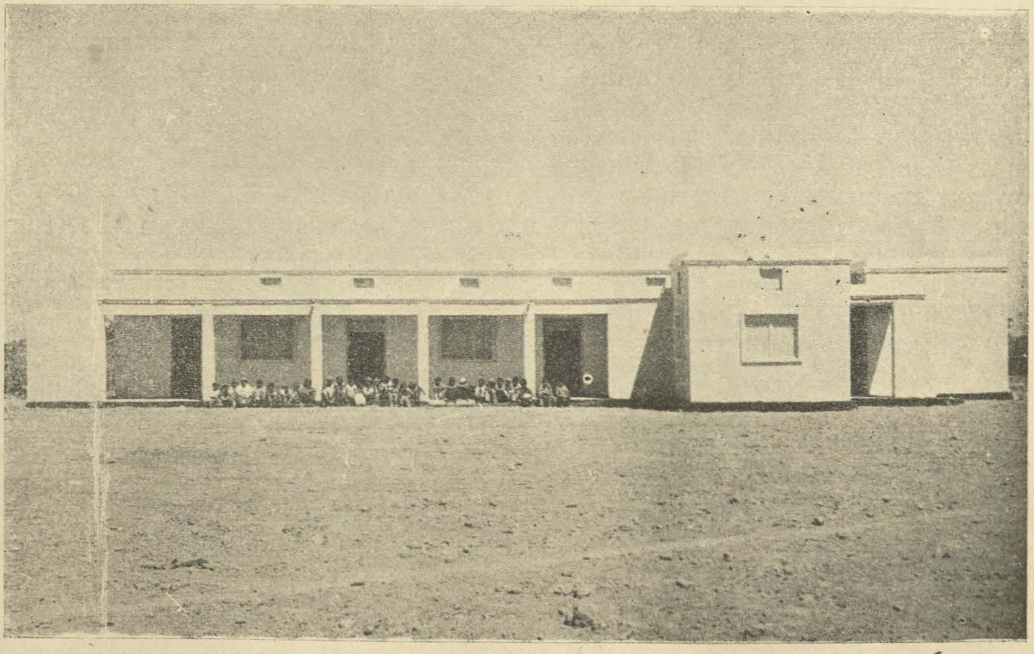
L (vi) 432—2

High School Buildings are being constructed at Sujawal and Mirpure Bathoro with an estimated cost of Rs. 3,30,000.00 and 2,20,000.00 respectively and both of them are nearing completion. The existing District Council High Schools at Sujawal and Mirpur Bathoro have been taken over by the Government and are being shifted to these new buildings. Three Middle Schools at Makli, Gharo and Buhara are under construction and are expected to be completed within the current financial year. Industrial Arts Course building in the Middle Schools at Jhimpir, Makli and Gharo are also complete. The Education Department, Government of West Pakistan has also provided an amount of Rs 2,24,000.00 for the construction of buildings for sixtysix new Primary Schools in the district at an estimated cost of Rs. 3,350.00 each. Thirtysix Schools have already been completed and the rest are under construction. Middle School at Mirpursakro has been upgraded to High School and a new building has been constructed at a cost of Rs. 70,000.00 which has since been completed. A new Technical Workshop has been added to the Local Government High School for Boys with an estimated cost of Rs. 40,000.00. This Workshop was opened on December 18, 1963 and for the first time in this district a Technical Education Conference was held at Thatta on December 18 & 19, 1963 which was attended by a large number of delegates from various Technical Schools of Hyderabad Region.

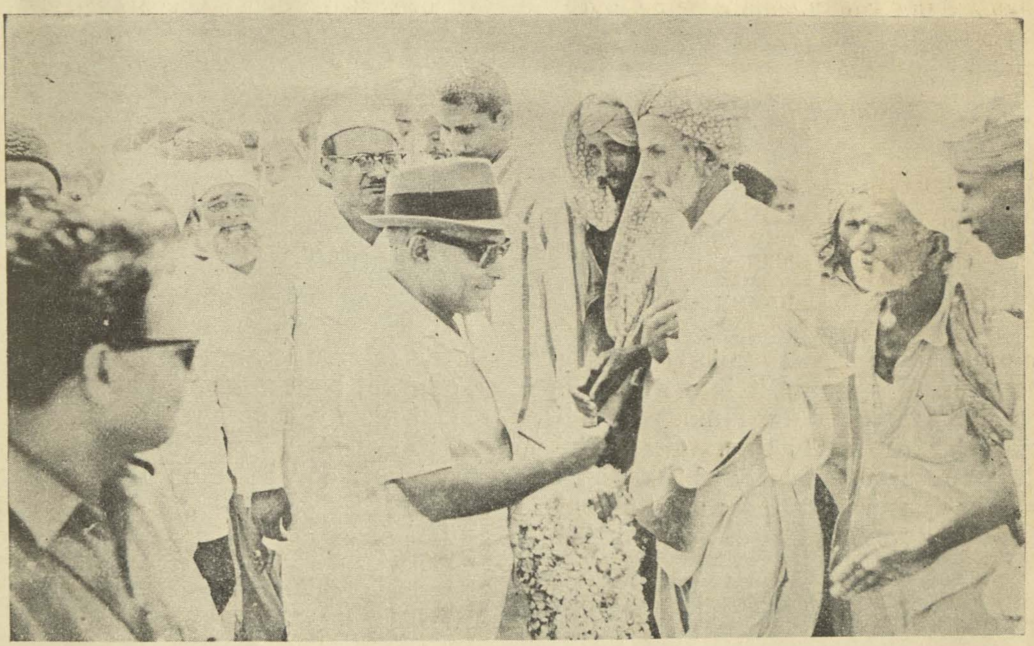
The Government has taken keen interest in the development of education in this district which is evident from the fact that a three day meeting of the members of the standing Committee on Education and Health of the West Pakistan Assembly was held in Thatta in October, 1963 which was presided over by the Education Minister. Begum Mahmooda Saleem.

Health.

In the Health Sector, the Rural Health Centre with an estimated cost



Middle School, Union Council Bello.



Commissioner Hyderabad Division Shaking hand with the villagers.

of Rs. 3,40,000.00 at Mirpur Sakro and a fifty bedded Hospital at an estimated cost of Rs. 13,00,000.00 are under construction. A Dental Clinic has been started, X-Ray Plant and Air Conditioning Units have been installed in Civil Hospital Thatta. Provision for more Rural Health Centres has been made in the next five year plan.

Water Supply Schemes.

Urban Water Supply Schemes worth Rs. 16.00,000.00 in Thatta and Makli Township and Rs. 5,00,00.00 at Sujawal have started this year. The Commissioner was kind enough to make a provision of Rs. 2,30,000.00 for the Sujawal Urban Water Supply Scheme. Thatta Municipal Committee and Town Committee, Sujawal have also paid their shares for the implementation of these schemes. The work of Rural Water Supply Schemes at Mirpursakro, Mirpurbathoro, Var and Jati has been started and is expected to be completed by the end of this financial year. Schemes for drainage in Thatta and Mirpur Bathoro towns have already been approved and are expected to start this year. Proposals have also been sent for Water Supply Schemes at Jungshahi, Jherruck and Darro which are expected to start in the beginning of the next financial year.

Agriculture.

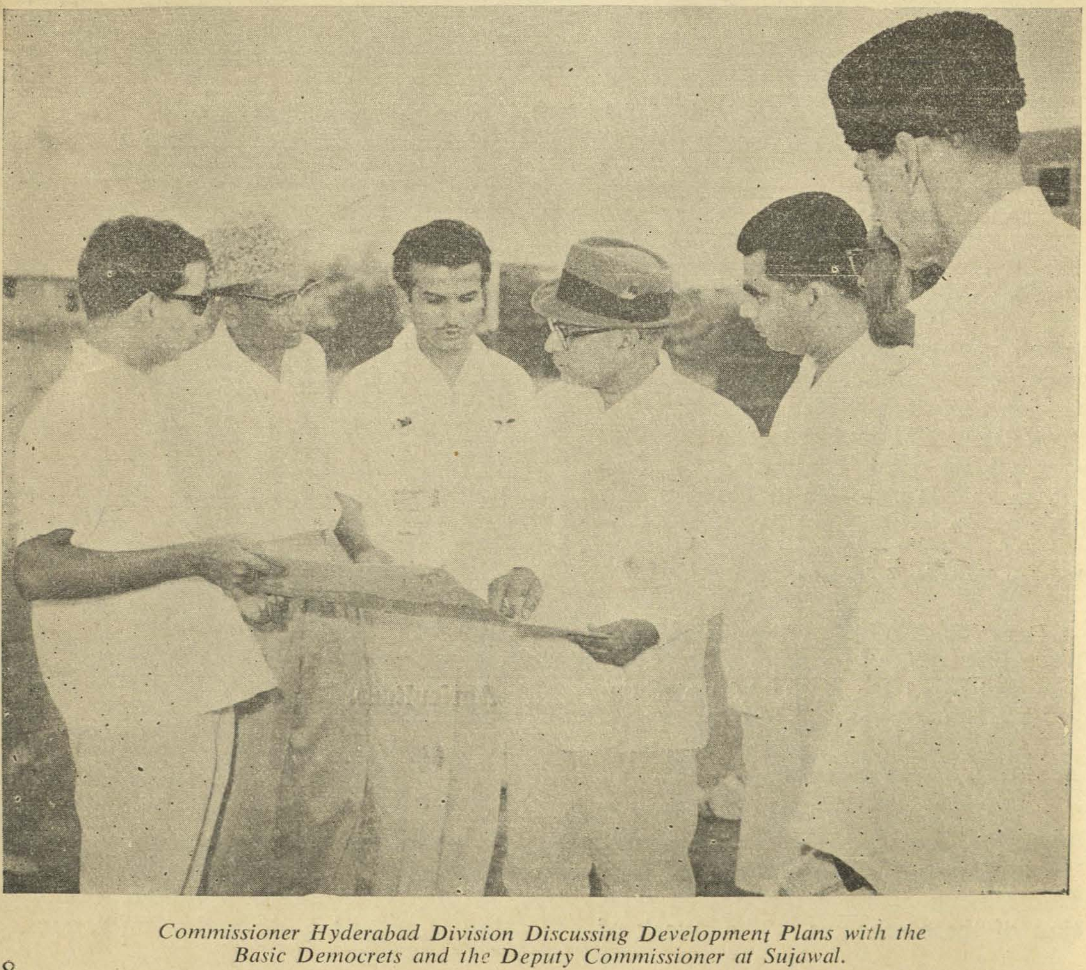
This district has been taken over by the Agricultural Development Corporation which has an ambitious programme for the development of agriculture in the district by digging new irrigation channels, drainage, removing of water logging and salinity, cons-

truction of metalled roads all over the district, introducing mechanised farming and other methods of better farming.

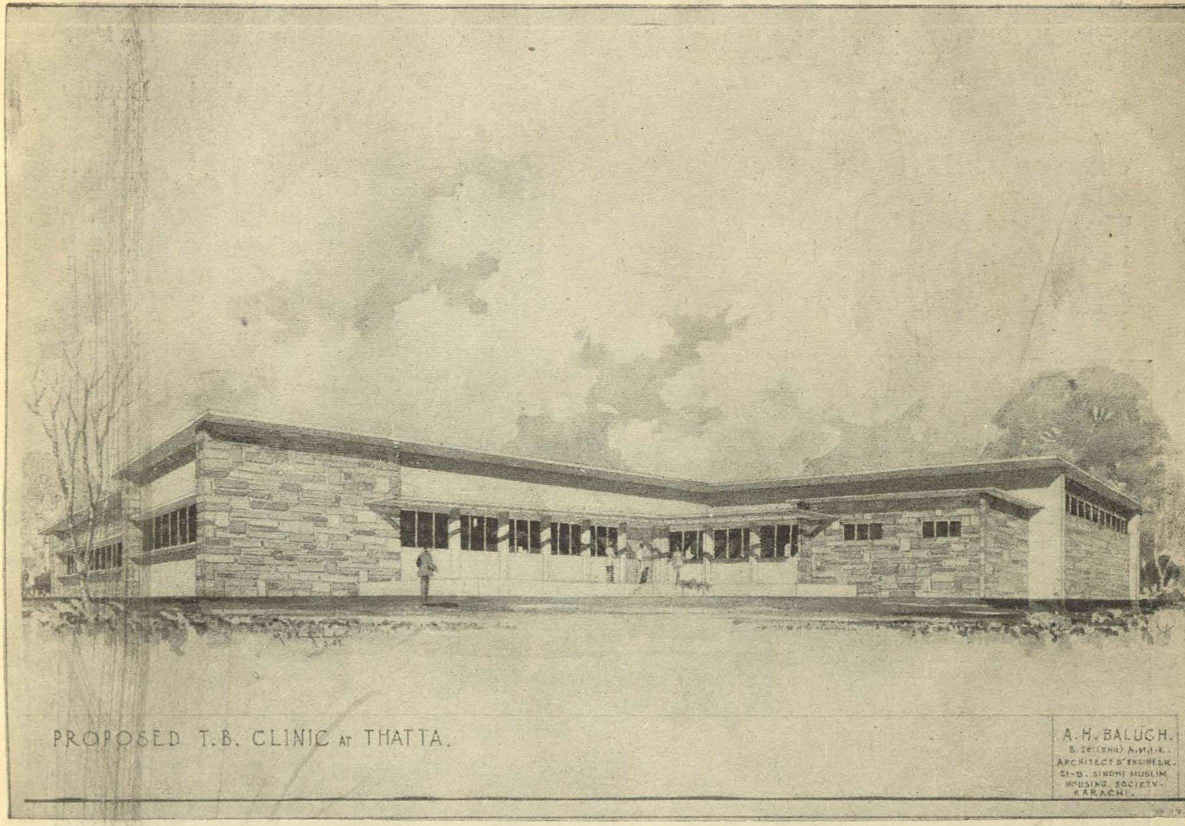
Communications and Buildings.

The Government has sanctioned an amount of Rs. 15,59,400.00 for the repair of the historic Shahjehan Mosque in Thatta which was built during the days of Mughal Emperor Shahjehan. It is proposed to repair and renovate the Mosque. The land surrounding the Mosque is also being acquired for turning it into a garden on the pattern of the famous Shalimar Garden at Lahore. Grain Godowns having a capacity of 2,000 tons at Thatta and 1,500 tons at Sujawal are under construction at an estimated cost of Rs. 2,70,000.00 and 2,02,000.00 respectively. The preliminary work on the most important project of constructing a Bridge over the River Indus, connecting the two Sub-Divisions of Thatta, namely Thatta and Shahbunder has also been finalised.

A proposal has already been sent to the Government for the formation of a Makli Improvement Trust for the development of Makli Hills, the District Headquarters at Thatta. If this scheme is approved by the Government both residential and commercial plots will be allotted. One third of these plots would be given to the residents of Thatta on "no loss no profit" basis and the rest will be auctioned.



Commissioner Hyderabad Division Discussing Development Plans with the Basic Democrets and the Deputy Commissioner at Sujawal.



Industry.

Thatta District is greatly lagging behind in Industrial development. Purely dependent on Agriculture, where most of the lands are now lying waste because of solinity and water logging, the people are extremely poor and per-capita income is probably the lowest as compared to the other districts of this region. Research in the field of agriculture shows that sugar-cane of good quality can be grown here and on experiment in some scattered fields the results have been quite encouraging. Thus, Thatta qualifies for installation of a Sugar Factory to be located either at Ghulamullah or Mirpur Sakro town. This will imeprove the economic condition of the residents of this area to a large extent. In Industrial Sector, Dhabeji town which is on main Railway line and both pipe lines of Sui Gas and Karachi Water Works pass through nearby, can be easily developed into an industrial estate. Nearer to Karachi and at the same time part of an undeveloped district, Industries located in Dhabeji will give the owners an eight year tax holiday. Already heavy industries, in private sector, like a Petrochemical Factory, Industrial Gasses Factory etc., are soon to be installed at Dhabeji.

Miscellaneous.

In social activities the district was not left behind. The District Tuberculosis Association is constructing a new Tuberculosis Clinic with twenty bedded Hospital at Makli at an estimated cost of Rs. 1,50,000.00. The

work has already started and is expected to be completed by the end of this financial year. The District Red Cross Branch has started a Red Cross Drug Store in Thatta which supplies medicines to the consumers on very cheep rates. It is constructing Maternity Homes at Mirpur Bathoro and Thatta, and organised a Meena Bazar in Thatta in November 1963. It also organises an Eye Camp at Makli every year in the month of December, for the treatment of hundreds of eye patients, including all sorts of operations free of cost. Free boarding and lodging is also provided to the patients. A sum of Rs. 600.00 was paid to a resident of the District who lost both his legs in a train accident for providing him with artificial limbs.

In the field of Sports the District Sports Association has organised various outdoor and indoor games in the district. A District Volleyball Tournament was held in November, 1963 at Sujawal and an Inter-District Hockey Tournament was held at Thatta. The Hyderabad Deputy Commissioner's Cricket Eleven played against Thatta Cricket Eleven at Thatta. The Chinese Table Tennis Team from the Republic of China was invited to play an exhibition match in September, 1963 at Thatta and the District teams of Cricket, Hockey, Tennis, Badminton etc. played various matches in the Inter District Tournaments outside the district.



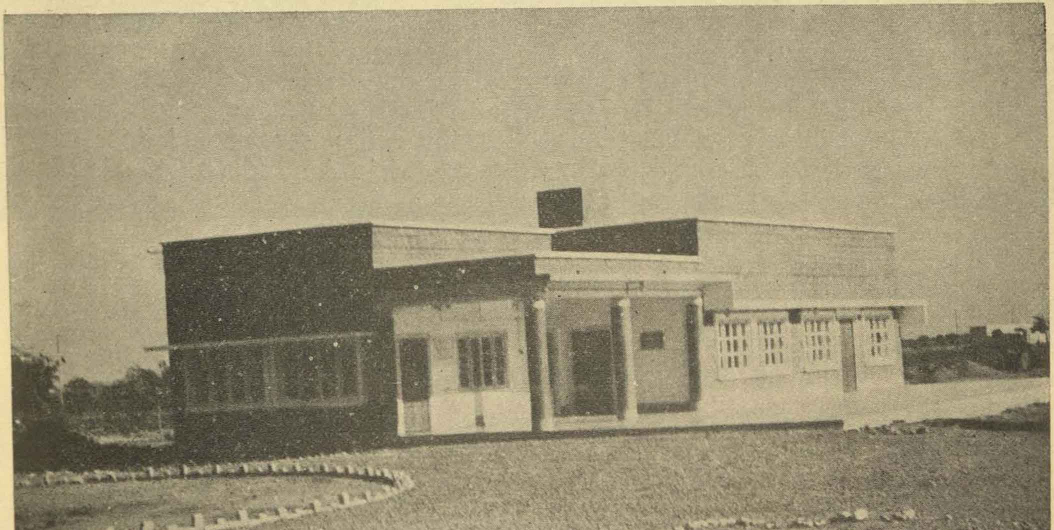
Members of the Chinese Table Tenis Team along with the Director of Education, District Officers and eminent Table Tennis Players of Pakistan at Thatta

A Gymkhana at Makli was constructed at a cost of Rs. 50,000.00 which is now a place of recreation and meetings for officials and non-officials. There is a proposal to have a boat club and a Badminton Hall attached to this Gymkhana. Two Cultural Shows of very high standard were



Mr. Mohammad Khan Junejo, Minister for Basic Democracies and Local Government, discussing certain Development Schemes with the Deputy Commissioner.

organised in aid of Tuberculosis Clinic at Thatta and Maternity Home at Mirpur Bhathoro in the respective places.



Makli Gymkhana

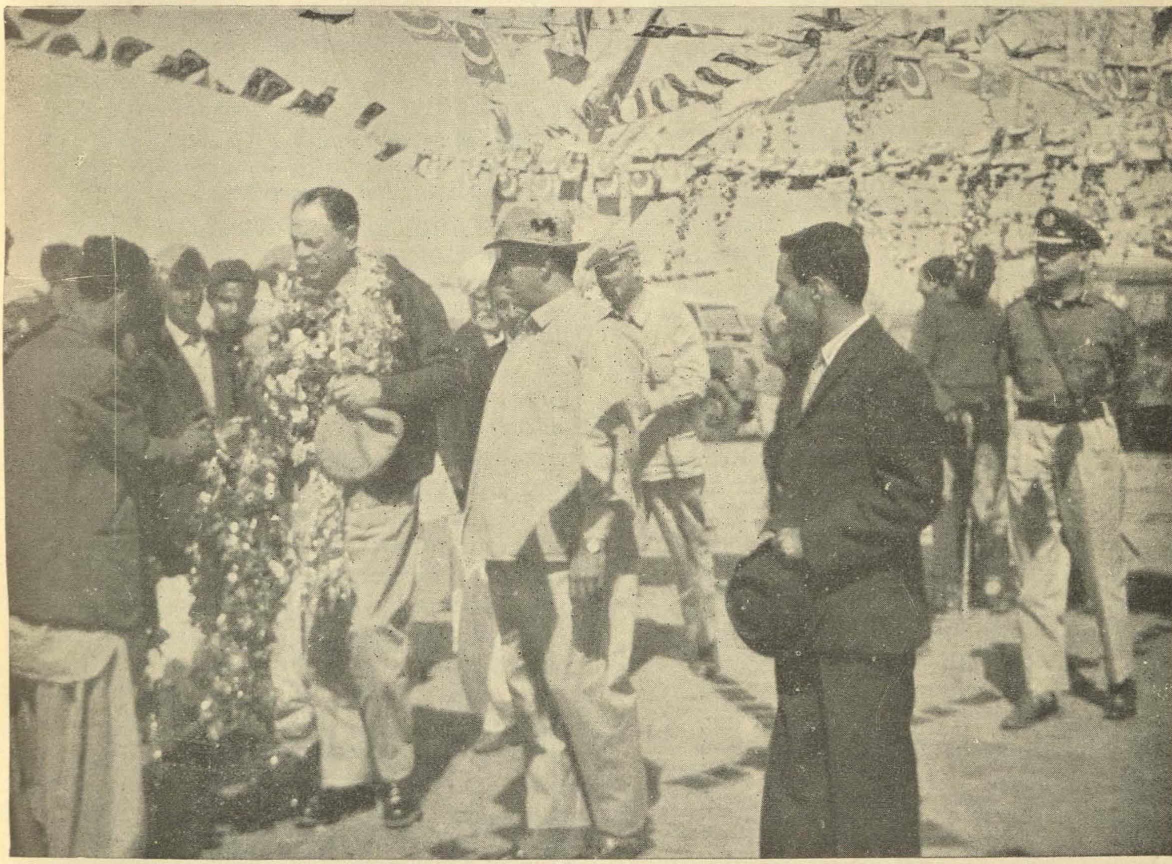
A Kinder Garten School at Makli has been constructed at a cost of Rs. 35,000.00, for providing educational facilities to the children of Thatta town in Montessori system.

A Basic Democracies Convention was held on January 4, 1964 at Mirpur Bathoro which was inaugurated by Mr. Muhammad Khan Junejo, Minister for Health, Basic Democracies and Local Government. Proposals have been sent to the Government for upgrading Union Councils Darro and Chuharjamali to Town Committees which are expected to be finalized before the end of this financial year. The Basic Democrats have been more closely associated with the development work and have been made a part and parcel of the District Administration.

A Mosque with a Darul Uloom and an Islamic Library is under construction at an estimated cost of Rs. 1,50,000.00. The corner stone of the Mosque was laid by the Commissioner, Hyderabad Division on January 31, 1964. The Darul Uloom will provide education to the children of the area in Holy Quran, Islamic studies and Theology on nominal fee and the Islamic Library will be the first of its kind in this region. The work is expected to be completed by the end of this year. A sum of Rs. 10,000.00 has been donated by the National Bank of Pakistan, through the efforts of Mr. Fakhruddin Burni, Superintendent of Branches and Mr. Azizur Rehman, Manager of the Thatta Branch. The Commissioner Rs. 15,000.00 from the Divisional has very kindly provided a sum of Council and Rs. 25,000.00 is paid by the District Council, Thatta. Generous contributions are pouring in every day from prominent citizens and phialnthropists and it is expected that enough funds will be available for the construction work.

It is also noted with great pleasure that new Banks are being opened in various parts of the district which is in itself an indication of better economic condition prevailing in the district. Thatta district is fortunate in playing host to many dignitaries of Pakistan, and also to VIPs from other countries because of its rich resources of different varities of shooting birds available in its innumerable lakes and fields.

A comprehensive scheme to be incorporated in the next Five Year Plan has already been submitted by Thatta District Council to the Government, the entire recommendations can be found in Appendix II of this Manual.



Field Marshal Mohammad Ayub Khan, President of Pakistan with Mr. Jamal Khan Laghari, M.P.A. and others Basic Democrates, on the occasion of his visit to Sujawal for Bird Shooting.



AGRICULTURAL DEVELOPMENT CORPORATION

Mr. SAIFULLAH KHAN,
Executive Engineer,
Ist G. M. Barrage, Thatta.

Introduction :

The basin of River Indus, of which Thatta District forms, a major part, has been under cultivation in scattered areas whereever water could be procuced, whether from Rains, River Floods, or Inundation channels in pre-historic days. But all this was unmethodical and whenever very heavy rains or floods attacked, all the crops, houses and dwellers were washed away and again a new generation had to restart the same type of cultivation. The ancient Indus Valley Civilization such as Mohanjodhoro, Harappa, Thatta etc. depended on such irrigation but due to heavy floods and changing of the courses of the river all was crumbled. In the 8th century Arab rulers used to charge the lands at different rates where the water was supplied through small channels in the basin of River Indus. After integration of the subcontinent the West Pakistan Government constructed Taunsa Barrage in the upper region and Kotri Barrage (Now Ghulam Muhammad Barrage) in the lower Indus Basin. Guddu Barrage has also since been completed. In the former Province of Sind a large number of small inundation canals, about 20 in number were constructed prior to British period which were ultimately remodelled and submerged into Sukkur Barrage, G. M. Barrage and Gudu Barrage.

The progress in Irrigation and Development of Agriculture in the sub-continent has been quite good during the last one hundred years. But due to partition and pouring in of a large number of Muslims from Bharat into Pakistan the food problem became a havoc. Wheat, sugar, etc. was required to be procured and imported from other countries to make up the deficiencies. On the other hand there was a lot of State land and lands of big landlords available for cultivation but was lying barren and uncultivated. The problem of bringing uncultivated land of big landlords was some what solved when the Revolutionary Regime, after the advent of October 1958, implemented Land Reforms and the poor 'haries' who were cultivting these lands since generation half heartedly, being only servants or tenants, became their masters overnight and started taking full interest.

Revolutionary Regime has an utmost desire to solve and set right all the problems of Pakistan at an atomic speed. In order to achieve self-sufficiency in the field of food and agriculture, it was realized that although va-

rious Government Departments vested with the direct responsibility for carrying out functions allotted to them in respect of Agricultural development, proved to be more bettlenecks and as such were a hinderance in the achievement of the goal. So formation of a semi-autonomous body, outside the routine duties of the government, was considered necessary to tackle the essential problems of Agriculture in West Pakistan with a proper cohesion and co-ordination as family members, of the different departmental officers with their fairly intensive efforts simultaneously in the field. West Pakistan Agricultural Development Corporation was brought into existence for this purpose and it started functioning from Ist Oct. 61, under the chairmanship of Maj. Gen. Malik Haq Nawaz with the help of Member Director (Field), Member Director (Finance). Secretary, General Manager and Project Directors for different projects and the officers from various Departments.

Activities in Thatta District.

Ghulam Muhammad Barrage Project of Agricultural Development Corporation covers major parts of Hyderabad District and Thatta District and for each District one or more District Officers are appointed to deal with their parts of duties. Thatta District extends on the right bank as well as on the left bank in the lowest basin of Indus including its delta.

The District Officers of the Departments stationed in Thatta District are on their way towards the efficient discharge of their duties, getting good progress and best achievements according to the programme of the West, Pakistan Agricultural Development corporation.

On the right bank Kalri Baghar Feeder Upper which has been taken out from G. M. Barrage at Kotri, feeds Kalri Lake to further give discharge to Kalri, Baghar Feeder Lower and subsequently to other branches, distributories and minors both perennial and non-perennial, almost 20 in number each.

Similarly three canals namely Lined Channel, Phuleli canal (old) and Pinyari canal, have been taken out from the Barrage on the left side. These canals feed a major portion of Hyderabad District and their distributories and minors further enter Thatta District on the left bank and irrigate the areas of Mirpur Batharo, Jati Sujawal and Ladiun talukas. The activities of W.P.A.D.C. have mostly been for the development of areas in Hyderabad District on the left bank and Thatta District on the right bank in the First Phase. This does not mean that Thatta District on the left bank has been ignored. This district will, however, be included in the programme for development in the Second Phase.

The areas, disposed of to the different categories of Agricultural Agencies upto and for 1962-63 in Thatta District are as under:—

		acres.
1.	Peasants (Haries)	80,920
2.	Co-operative Societies	21,492
3.	Muhajars	10,070
4.	Mechanised Farming	31,275
5.	Gallantry Awards (Defence Forces)	5,875
6.	Auctions	27,308
7.	Long Term Lease	1,761

In addition to the above an area of 10,800 acres has been reserved for forest and harnessing the coastal belt 50 acres for forest nurseries, 10,801 acres for Village AID, Mundi Towns, Chak abadies, Lambardaries, Stud Bull Farms and village forests or grazing strips, 261 acres for Food Council of Pakistan and 5,546 acres for the construction of drains.

The Agricultural Machinery Organization has done a lot in developing old barren lands which could never be expected to be brought under cultivation. High heaps and Dharas were cleared and brought into proper shape of fields. They had put in three units of machineries to work simultaneously in different sectors of the District and developed about 80,000 acres of land including 12,000 acres for Co-operative Societies. Unit No. 1 has worked for 96,137 hours from 5th January 1961 to 31st December 1963 and developed 22,707.39 acres of land Unit No. II worked for 81,583 hours from 5th February 1961 to 31st December 1961 and developed 25,709.19 acres of land. Unit No. III has worked for 93,923 hours from 3rd March 1961 to 31st December 1963 and has developed 31,377.01 acres of land.

To get the maximum efficiency from the field staff and to hear direct and for the quick disposal of difficulties of Zamindar a Forward Camp has been constructed at Gharo where field officers of Revenue Colonization, Irr-



Lotus Lake near Makli Hills.

gation B.&R. and Agriculture etc. are stationed with their staff. A Mandi town at Gharo is also going to be constructed very soon. Its layout is under final touches in the office of the Director of Town Planning, Southern Area, Hyderabad, Another Mandi Town at Mirpur Sakro has been included in the programme for the development of this area.

One Veterinary Hospital has been completed at Jherruck at a cost of Rs. 1,50,000 and a second one is under construction at Var. It is hoped that this second hospital would be completed by the end of current financial year. Two Workshops for Agriculture Machinery have been constructed at Thatta on the Right Bank and at Mirpur Batharo on the Left Bank along with residential buildings for the officers and staff of the organization. One Cotton Research Station at Thatta has been approved and its construction would be taken in hand very soon. The construction of Rest Houses, Hotels, Boat Club and Swemming Pools. etc., in order to make Kalri Lake a First class Picnic Resort is under the active consideration of the Corporation Authorities. When completed, it would be a great attraction to Thatta District for the public of far off places. A programme for development of cross country roads is also in its execution and the following roads have been included the programme: —

A Metalled Roads to be Constructed in the Ist Phase.

From	To	Miles	Estimated Cost
1. Sujawal	Chuharjamali	10 miles	15.94 lacs.
2. Sujawal	Belo	9 Do.	8.96 Do.
3. Mirpur Bathoro	Daro	8 Do.	7.97 Do.
4. Chuharjamali	Shah Bunder	19 Do.	18.93 Do.
5. Sujawal	Jati	22 Do.	21.91 Do.
6. Sujawal	Badin	48 Do.	47.81 Do.
7. Thatta	Pirpatho	12 Do.	11.95 Do.
8. Buharo	Garho	11 Do.	10.96 Do.
9. Mirpur Sakro	Ghulamullah to Pir patho Road.	20 Do.	19.92 Do.

B. *KATCHA ROADS IN 1ST PHASE AND METALLED ROADS IN 2 ND PHASE*

	From	To	Miles	Estimated Cost	
1.	T. M. Khan	Jati via Jalalani Regulator.	60 miles.	16.20 lacs. 48.56 Do.	Ist Phase. 2nd Do.
2.	Jati	Ahmed Rajo to Sarani.	50 Do.	13.50 Do. 36.30 Do.	1st Do. 2nd Do.
3.	Chuharjamali	Jati	24 Do.	6.38 Do. 17.42 Do.	1st Do. 2nd Do.
4.	Thatta	Ghulamullah	11 Do.	2.97 Do. 7.99 Do.	1st Do. 2nd Do.
5.	Gharo	Ghulamullah	18 Do.	4.86 Do. 13.07 Do.	1st Do. 2nd Do.
6.	K. A. Shah	Mirpur Sakro	21 Do.	5.67 Do. 15.25 Do.	1st Do. 2nd Do.
7.	K. A. Shah	Chuharjamali	13 Do.	3.51 Do. 9.44 Do.	1st Do. 2nd Do.
8.	Pirpatho	K. A. Shah to Gharo Road.	27 Do.	7.29 Do. 19.60 Do.	1st Do. 2nd Do.

All the above roads are in progress according to the programme.

Construction of bridges over River Indus between Thatta and Sujawal is also under active consideration. The preparation of estimates and plans has since been completed. Along with the construction of this bridge roads from Thatta to Ferry and Ferry to Sujawal will be taken under improvement.

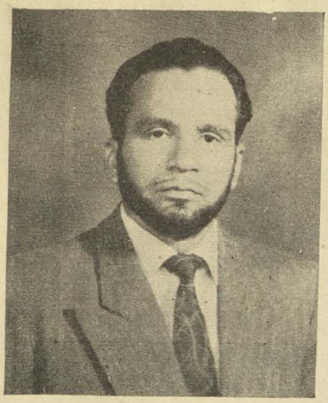
Development of Fisheries by Fisheries Department of G. M. Barrage project has also been under taken by developing the dhands and lakes for fish culture by introducing the fast growing fisher-lings. A fishermen Co-operative Society under the name of Kalry Fishermen Society has been organized and registered for providing fishing materials to fishermen. West Pakistan Co-operative Development Board has sanctioned one Ford Truck worth Rs. 40,000 to facilitate the fishermen's catches to be taken to the market immediately. Another sum of Rs. 30,000 has been sanctioned for the purchase of Nylon Twine and other fishing materials. Development of fisheries envisages production of thousand of maunds of fish daily from water stretches in this District.

W.P.A.D.C. has also got a biggest and a most alarming problem of

Water-logging and Salinity to face. Most parts of Thatta District have been facing this twine menace. The excavation of some drains in the District by Thatta Drainage Division has served a very useful purpose. These drains have driven a lot of waste water to the sea.

A vast programme of afforestation in the area is also forthcoming. Area around Kalri lake is going to bring up good and useful belt of trees along with its development. All roads proposed to be avenued. Salt bearing trees, in patches at different and proper sites, will be grown along the sea coast.

Thatta District on the whole is under great activities of W.P.A.D.C. as regards reclamation of land, developing the waste land, bringing under useful purposes the patches of water, levelling and bringing under cultivation the strips of land which remained under high heaps of sand or Kallar for ages, rectangulation and distribution of state land to different agencies of Agriculture, Extension and proper control of irrigation channels and distribution of water, procurement and supply of goods seed and fertilizers to the farmers at their doors, tackling the problems of water-logging and Salinity and construction of drains, development of roads, construction of veterinary hospitals, Research Stations, Mandi Towns, evolving a suitable and effective cropping pattern and what not for the best development and promotion of the agriculturists of this area.



AGRICULTURE

YUSUFZAI ABDUL MATIN KHAN,
District Agriculture Officer, Thatta.

District Thatta has got many agricultural potentialities. It has a mild climate which can favour the growth of a wide range of crops. Many new crops like jute and coconut can be successfully grown here. Cotton, a cash crop, which was thought to be a failure here, has been proved to be a success. The Delta Region of River Indus has a very rich soil which can support a variety of cash crops. Although adequate irrigation facilities have not yet been provided to this part of the district even then it is growing bumper crops of vegetables and fruits like Bananas and papayas. On the completion of the Oderolal Canal new area will be released for cultivation. Experts have opined that this tract has got the best type of soil in the whole of Ghulam Muhammad Barrage project.

There is no doubt about it that the fertility of the soil, like that in the delta region of River Indus, is a pre-requisite of a bumper crop. But there are other factors also which are equally important e.g. good seed. adoption of improved methods of cultivation and protection of the crop from the pest attack. Specially the last item namely protecting the crop from pest attach needs more attention in the humid climate this tract. All stors of plant pests find the humid climate of the area more favourable to their breeding. This is a problem which needs attention of all concerned. If the land is less fertile, or inferior quality seed is used, of the farmer has not laboured sufficienty in his field, but the crop was given protection against plant pests then he can expect some return from the soil. But if the protection of the crop from the pest attack is neglected then his whole crop even can be destroyed and no return at all can be expected. The story can be more sad when the farmer has sown on a very fertile soil a very high quality seed and has put all his efforts according to the recommended improved cultivation methods but has neglected the protection of his crop from pest attack.

Fertility of the soil can be maintained by applying fertilizers. Chemical fertilizers give immediate food material to the crop for its better growth while organic fertilizers like the farm yard manure are slow in action. But they have got the advantage of improving the texture of the soil which is not possible in the case of the chemical fertilizers. Application of green manure reduces salinity. Chemical fertilizers were lately being supplied by the Co-

operative Department and arranged by the supply wing of the Agricultural Development Corporation. The Government have now decided to make it available in the open market.

Good quality seed gives a better quality of the crop. The seed can be had from the cooperative and supply departments of the A.D.C.

Improved methods of cultivation Include many Items. There are recommended and demonstrated by the staff of the Agricultural Department. The correct lay out of the field is the first step. This is followed by preparation of a good seed bed. The seed should be sown in the correct way and at the proper time which is always the beginning of the season. The crop has got to be properly intercultured to ensure proper aeration of the soil and checking the growth of weeds which are the undesirable competitors of the crop.

Protection of the crops from the pest attack is being provided by the department of the Agriculture on a very limited scale. This is for the sake of demonstration only. The resources do neither allow to make this service available for each and every cultivator nor it is practically possible. The cultivators are advised to maintain their own sprayers according to their resource and their holdings. The Department can supply them readymade pesticides or will advise the preparation of such mixtures for which ingredients are available locally.

A brief account of the activities of the Agriculture Departments in Thatta District is presented as under: —

1950 *to* 1958.—50 demonstration plots were kept for practical demonstration of the improved methods of cultivation. 1805 bages of fertilizers were distributed amongst the cultivators to increase the yield of the crops. 52 cinema shows were held in the villages for giving wide publicity to the improved agricultural practices. 9056 maunds of good quality seed was distributed for raising good quality crop. 42565 maunds of seed was treated chemically against seed and soil borne diseases. 3055 acres of fields were covered against various pests which destroy the crops.

1958 *to* 1963.—120 demonstration plots were kept for practical demonstration of the improved methods of cultivation, 2755 bages of fertilizers were distributed amongst the cultivators to increase the yield of the crops. 247 cinema shows were held in the villages for giving wide publicity to the improved agricultural practices. 23608 maunds of good quality seed was distributed for raising good quality crop. 68137 maunds of seed was treated chemically against seed and soil borne diseases. 241369 acres of fields were covered against various pests which destroy the crops.

Future Programme.—This includes various items. Demonstration plots are to be maintained strictly on the most scientific lines like the experimental plots. This will, besides giving a "seeing-is-believing" demonstration, will provide valuable data for further recommendations. Model farms on the lands of progressive farmers are to be laid out according to the recommended practices. This will compare the yield and income due to that between old and improved farming practices.

Special areas have been selected to put concentrated efforts of the department. This has been done in view of the limited resources. 75% of the staff and resources are concentrated in these selected circles and the remaining

25% staff and resources are for the rest of the area. This arrangement will be rotated to give chance to others.

As regards the horticultural activities stress will be laid on layout and planting of gardens on modern lines. Old gardens will be remodelled as far as possible. New plants will be introduced. Preservation of fruits by preparation of various fruit products is to be popularised amongst the public.

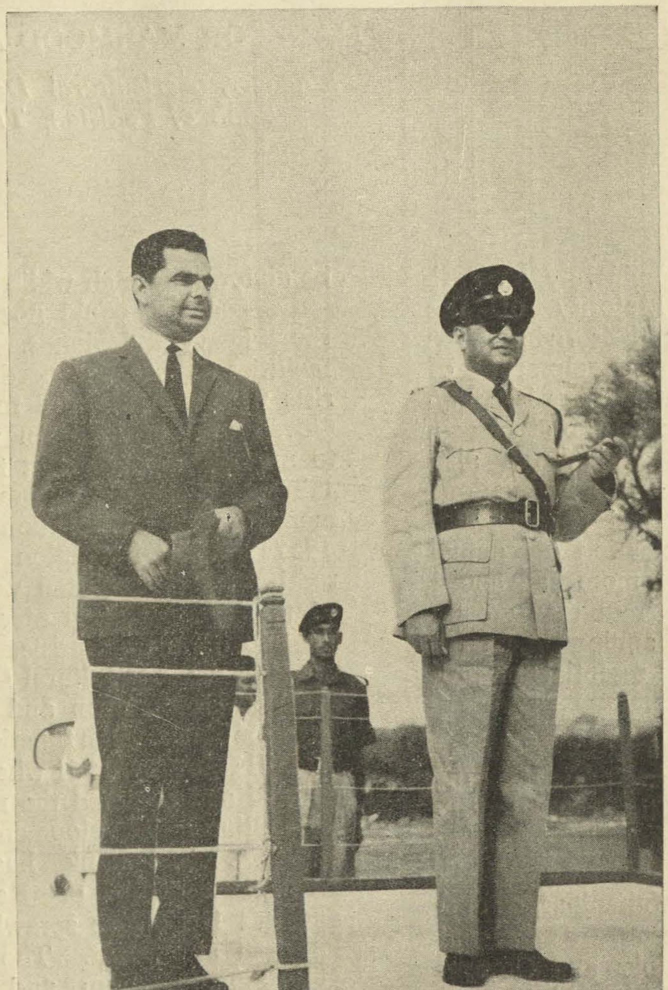
As the importance of plant protection is very much felt in this tract wide spread aerial spraying is being arranged. 60,000 acres of paddy crop will be sprayed from air with the cooperation of the Central Plant Protection Department in the months of August and September 1964. For this purpose six landing strips will be required. If the rainfall does not spoil these grounds in next season the spraying is expected to be accomplished sucessfully. If pucca landing strips are available such un-certainty of aerial spraying in rainy season can be avoided. The Central Government have in view the construction of pucca landing strips through out West Pakistan, one of them will be Located at Mirpur Sakro.

Ground spraying on various crops will be carried on for the demonstration of the plant protection technique to the cultivators who may be able to do it themselves in the near future. This is the job which is to be done by every cultivator if he really wants to protect his crop. No other agency can do this for every one. Thatta possesses immence potentialities for the development of Agriculture. All the requirements which are necessary are available. The climate is extra ordinarily favourable for the growth of all sorts of crops. Many crops can be grown quite in advance as compared



Prize Winning Bull at Meher Shah Fair.

to Northern regions and can thus capture market. The area is already a project area under the West Pakistan Agricultural Development Corporation. And last but not the least important is the fact that the district is headed by such an administrator who is all for the development of this district.



Deputy Commissioner and the Superintendent of Police reviewing the March past on the occasion of Pakistan Day.



AGRICULTURAL DEVELOPMENT BANK

MANZOOR MAHMOOD ALI KHAN,
Manager, Agricultural Development Bank of Pakistan, Thatta.

Pakistan is predominently an agricultural country. Majority of the people depends for their living upon agriculture. The develpment of agriculture on scientific lines is a crying need of the time. Like other productive enterprizes agriculture also requires finance because the operations have to be started and expenditure undertaken in anticipation of actual production. The more advanced kind of agriculture requires greater investment in farm equipment, seed, manure and other essentials of production.

Before independence, in Pakistan areas, as in other parts of India, the agencies that catered the credit requirements of the agriculturists directly or indirectly were money lenders, indigenous bankers or Mahanjans, co-operative credit societies, commercial banks, mortgage banks and Government in the form of Taccavis. Since partition there has been a change in the relative importance of these agencies and some of them are inoperative in Pakistan. The rate of interest charged by money lenders used to be abnormally high while the co-operative societies could not cope with the heavy demands. The credit facilities to meet the needs of agriculrists were unstable and meager. The Government of Pakistan with a view to provide greater credit facilities established the Agricutural Development Finance Corporation in 1953. In 1957 another institution *i.e.* Agricultural Bank of Pakistan was established to provide still greater credit facilities to the agriculturists. Both these agencies *viz.* Agricultural Development Finance Corporation and Agriculture Bank of the Pakistan functioned side by side till February, 1961 when they were merged and assumed the name of the Agricultural Development Bank of Pakistan. The Bank has an authorised share capital of Rs. 20 crores and has 110 offices sprawled all over Pakistan at present. The bank provides long, medium and short-term loans to individuals, co-operative societies and other corporate bodies for agriculture and allied activities. The loans are given both in kind and each against personal surety or security. They are refundable in various dura-

tions ranging from 18 months to seven years depending upon the nature of loans.

The main objectives of the bank are to make better provision for affording credit facilities to agriculturists and to persons engaged in cottage industries in the rural areas and for matters connected therewith. In transacting its business the bank is required, as for as possible, to give preference to the credit needs of small agriculturists. Besides the development of agriculture loans for the development of fisheries, horticulture, sheep breeding, dairy farming and poultry farming are also provided by the bank. Recently the loans for the development of cottage industries such as crate making, shoe making, purchase of saw machines, gur making and sericulture have also been introduced.

The Bank authorities are constantly making endeavours to simplify the procedure for the grant of loans. Efforts are also being made to provide credit facilities to the farmers at their door steps. The Bank is also allowed to undertake reason on agricultural credit, marketing and cottage industry etc. and to make arrangements for training facilities for the benefit of its personnel.

Alike other branches, Agricultural Development Bank of Pakistan established a Branch at Thatta in order to keep paces with the fast development of the District. The branch was inaugurated by Mr. Abu Nasar, C.S.P., Commissioner, Hyderabad Division and started functioning with effect from 18th June, 1962. Before the establishment of Thatta Branch the credit facilities to the agriculturists of the District were provided by the Karachi Branch. Thatta Branch only caters the needs of the farmers of right bank of Indus comprising Talukas Mirpur Sakro, Thatta and Ghorabari while the farmers on the left bank of the river Indus are being provided their credit requirements by Tando Muhammad Khan Branch with a Pay Office at Mirpur Bathoro. This demarcation has been made with the sole object of providing the maximum and efficient service to the clientele with the least difficulty to them. The Bank marked gradual rise in the field of the loaning which can be observed from the table indicated below:—

TABLE SHOWING PROGRESS OF LOANING.

Period.	Amount sanctioned.		Amount paid.	
	Secured.	Surety.	Secured.	Surety.
	Rs.	Rs.	Rs.	Rs.
July to September, 1962	53,370.00	11,910.00	31,610.00	11,910.00
October to December, 1962	79,634.00	13,779.00	46,405.00	12,859.00
January 1963 to March	2,03,609.00	50,540.00	95,900.00	44,545.00
April to June	3,48,803.00	10,280.00	2,14,368.00	17,195.00
July to September	1,21,595.00	11,260.00	1,37,264.00	11,260.00
October to December 1963	44,233.00	..	1,34,197.00	..
Total ..	8,51,244.00	97,769.00	6,59,744.00	97,769.00

L (iv) 432—5

The new settlers in Thatta under Ghulam Muhammad Barrage schemes are given special consideration as they need more financial assistance to implement their schemes. They can obtain loan to the extent of 80% of their initial deposits although their title over the land remains in-coherent until they deposit their all instalments towards the purchase of land. The following table shall indicate an idea of the credit facilities having been provided to these settles:—

AMOUNTS PAID TO THE SETTLERS UNDER GHULAM MUHAMMAD BARRAGE.

Paid.	Allotees under mechanised Sch.	Auction Purchasers.	Old Settlers.
	Rs.	Rs.	Rs.
Since inception upto June, 1963 ..	37,480.00	1,38,779.00	1,50,548.00
July to September, 1963	17,330.00	21,900.00	73,690.00
October to December, 1963	2,000.00	73,565.00	76,212.00
Total ..	56,810.00	2,34,244.00	3,00,450.00

The Thatta Branch upto 31st December, 1963 sanctioned a sum of Rs. 9,49,013.00 for various purposes of which Rs. 7,57,513.00 has been paid. The purpose-wise break of loans sanctioned upto December, 1963 is appended below which shall indicate the progress so far made by this Branch:—

Items	Short Term	Medium Term	Long term
	Rs.	Rs.	Rs.
Tractors	..	.. ..	2,12,869.00
Tube Wells and wells.	..	..	23,100.00
Seeds	54,563.00	..	..
Pumps and Engine	..	..	37,600.00
Fertilizer	42,505.00	..	..
Levelling of land and Jungle Clearance.	..	1,89,268.00	..

Item	Short Term	Medium Term	Long Term
Excavation of Channels	..	86,605.00	..
Bullocks	..	1,71,510.00	..
Godowns	..	40,700.00	..
Horticulture	..	..	66,800.00
Bullock Carts	..	9,500.00	..
Implements	..	2,543.00	..
Labour Charges	1,450.00	..	..
Miscellaneous	..	10,000.00	..
Total ..	98,518.00	5,10,126.00	3,40,369.00

The objectives of such an institution will not be achievd until and unless the amount so advanced is repaid by the loanees. In order to provide more and more money to the farmers, it is imperative that money should be on rotation. If it is blocked at one end the other needy cultivators will be deprived of.

We are putting all possible efforts to improve upon our recovery position and are indebted to Mr. Shah Jehan S. Karim, C.S.P., Deputy Commissioner Thatta who has very kindly extended his co-operation in getting our dues recovered. We are also thankful to the Muhtiarkars for their efforts and are confident that the agriculturists shall also realize their responsibility and in future shall continue to repay their dues without any pressure.



Basic Democracies

MAJOR AFTAB ALI SHAH

Assistant Director,
Basic Democracies, Thatta.

The District Council, Thatta consists of 17 officials and 17 non-official members having the Deputy Commissioner as Chairman.

There is only one Municipal Committee Thatta which consists of six non-officials (four Chairman Union Committees and two appointed) and two official members. The Daftardar to the Deputy Commissioner Thatta is its Chairman, while Syed Allahdino Shah son of Waledino Shah, an Advocate of Thatta is its Vice-Chairman. The Municipal Committee is divided into four Union Committees having three elected members each.

There are seven Tehsil Councils in this District as shown above of which two Tehsils namely Thatta and Sujawal have Deputy Collector/Assistant Commissioner as their Chairman, while the rest of the Tehsils have their Mukhtiarkars as Chairman.

There are two Town Committees Sujawal and Mirpur Bathoro both in Shahbunder Sub-Division of this (two appointed) and four-(three elected and one appointed) members respectively.

As regards the rural area, this district is divided into 35 Union Councils.

This District is represented by one Member in the National Assembly, two members in the Provincial Assembly and five members in the Divisional Council Hyderabad.

The financial position of the people of the district is not sound for the reasons that some of its portion is hilly tract, the inhabitans of this tact solely depend upon the cattle wealth, while the major portion of rest of the area is affected with water logging and salinity as a result of which the yield per acre of the agriculture products is very low in comparison to the other areas of Sind.

The main production of this district is paddy crop of inferior quality. Due to water logging and salinity, there grows only one crop in a year. Also there are no major cash crops, trade and industrial units in the district. All this has resulted in poverty of the people and consequently a feeling of inertia and dis-interestedness in efforts to raise their standard of living. It is on this account that this district has been declared as one of the backward areas in West Pakitsan.

Activities of Basic Democracies.

The District Council of this district has no major source of income. The only one major source of its income was the auction of fisheries of Indus River which has also been taken away by the Fisheries Department.

The under mentioned schemes are under execution by the District Councils, to be completed during the current financial year:—

1. (i) Construction of District Council office building at an estimated cost of Rs. 2,20,000.00.

(ii) Construction of two bungalows at an estimated cost of Rs. 40,000.00 each for the Chief Officer and the Engineer.

2. Construction of Medical Dispensaries at:—

(a) Village Jungri (Union Council Jhimpir).

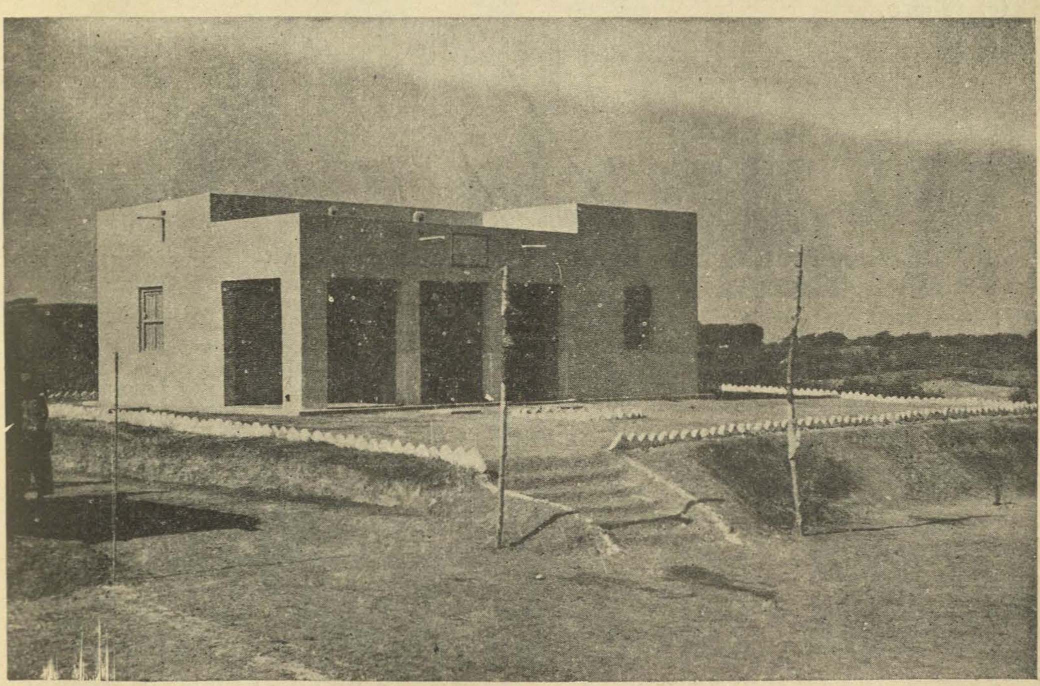
(b) Village Keti Bunder.

(c) Village Hilaya.

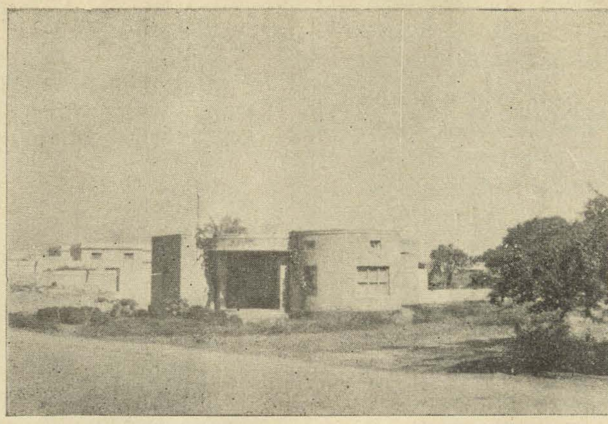
(d) Village Buhara.

(e) Village Ladiun.

(f) Village Jhimpir.



Union Ghar, Kalri.



Public Library, Town Committee Sujawal.

3. Construction of Shopping Centre at:—

(a) Chuhar Jamali.

(b) Jati.

(c) Gharo.

4. Thatta—Idd-gah road.

Likewise the Municipal Committee Thatta has limited sources of income. Its yearly budget is about Rupees 2,00,000.00 only. It has completed the following development schemes in Thatta town during the past two years: —

1. Construction of one building at an estimated cost of Rs. 30,000.00 rented to National Bank of Pakistan Thatta.

2. Construction of Pucca roads in Thatta town at an esimated cost of Rs 20,000.00.

3. Construction of four pucca shops in Thatta town at an estimated cost of Rs. 20,000,00.

4. Purchase of one Tractor with two Trailors at a cost of Rs. 19,000.00 for conservancy purposes.

5. Construction of one Library Building in Thatta town at an estimated cost of Rs. 10,000.00.

The Town Committe Sujawal and Mirpur Bathoro have undertaken the following development schemes in their respective areas:—

Town Committee Sujawal.

1. Construction of drinking water tank in Sujawal at an estimated cost of Rs. 20,000.00.

2. Construction of Library Building at a cost of Rs. 10,000.00.

3. Construction of two Public Parks in the town at an estimated cost of Rs. 6,000.00.

4. Pavement of streets at a cost of Rs. 12,000.00.

5. Construction of Shopping Centre at an estimated cost of Rs. 25,000.00.

6. Construction of Fish and Meat Market at an estimated cost of Rs. 10,000.00.

7. Purchased portable water pumping set at a cost of Rs. 5,000.00.

Town Committee, Mirpur Bathoro.

1. Construction of drinking water tank at an estimated cost of Rs. 35,000.00.

2. Construction of Library Building at an estimated cost of Rs. 10,000.00.

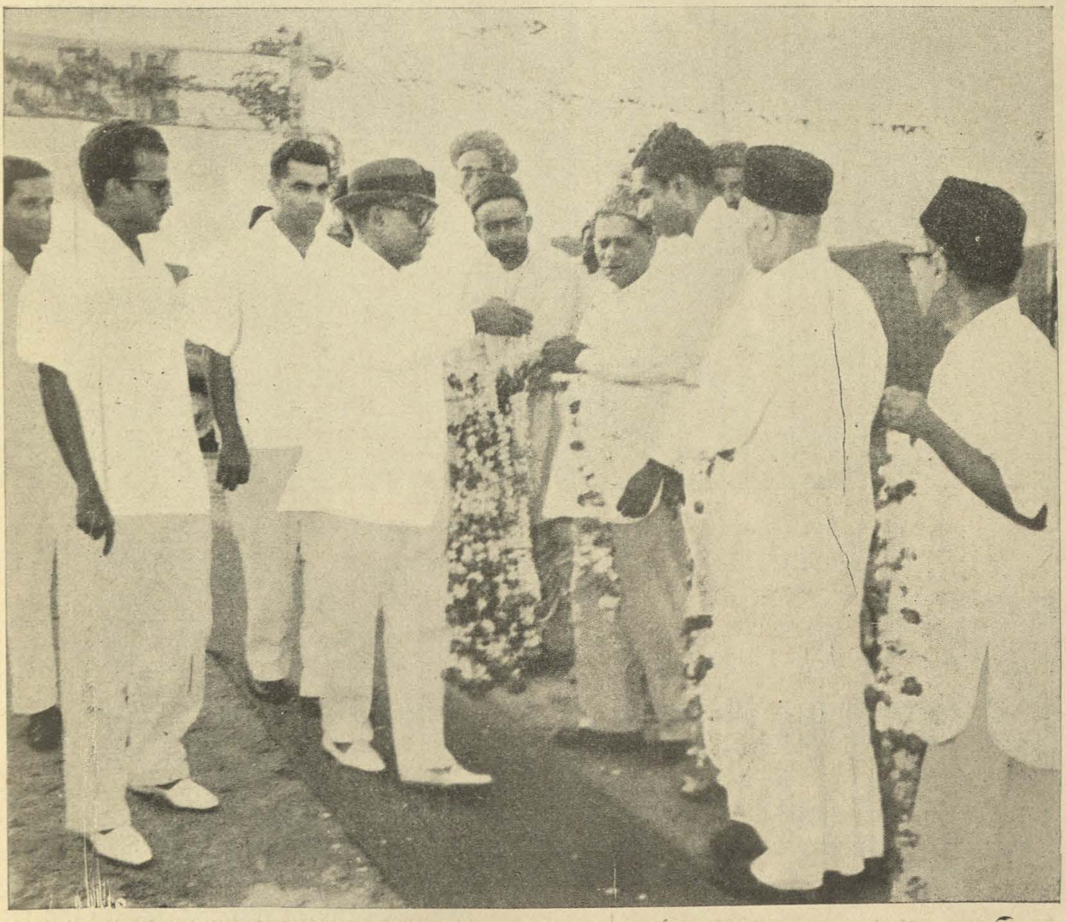
3. Construction of one public park at a cost of Rs. 2,000.00.

4. Construction of pucca road at a cost of Rs. 12,000.00.

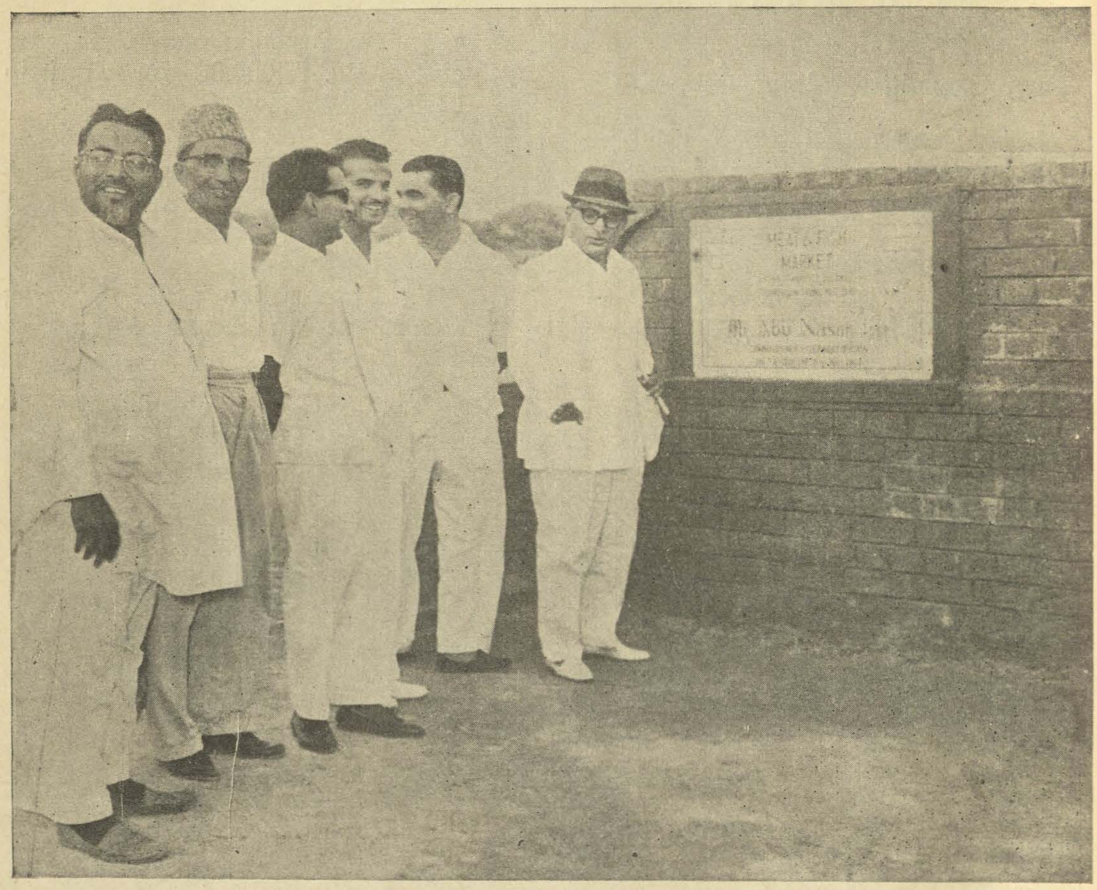
5. Construction of Idd-gah at a cost of Rs. 15,000.00 on self help basis.

6. Construction of office building at an estimated cost of Rs. 13,000.00.

7. Construction of Shopping Centre at an estimated cost of



Commissioner, Hyderabad Division, being welcomed by the Basic Democrates at Sujawal.



Commissioner, Hyderabad Division, unvailing the Foundation Stone of Meat and Fish Market, Sujawal.

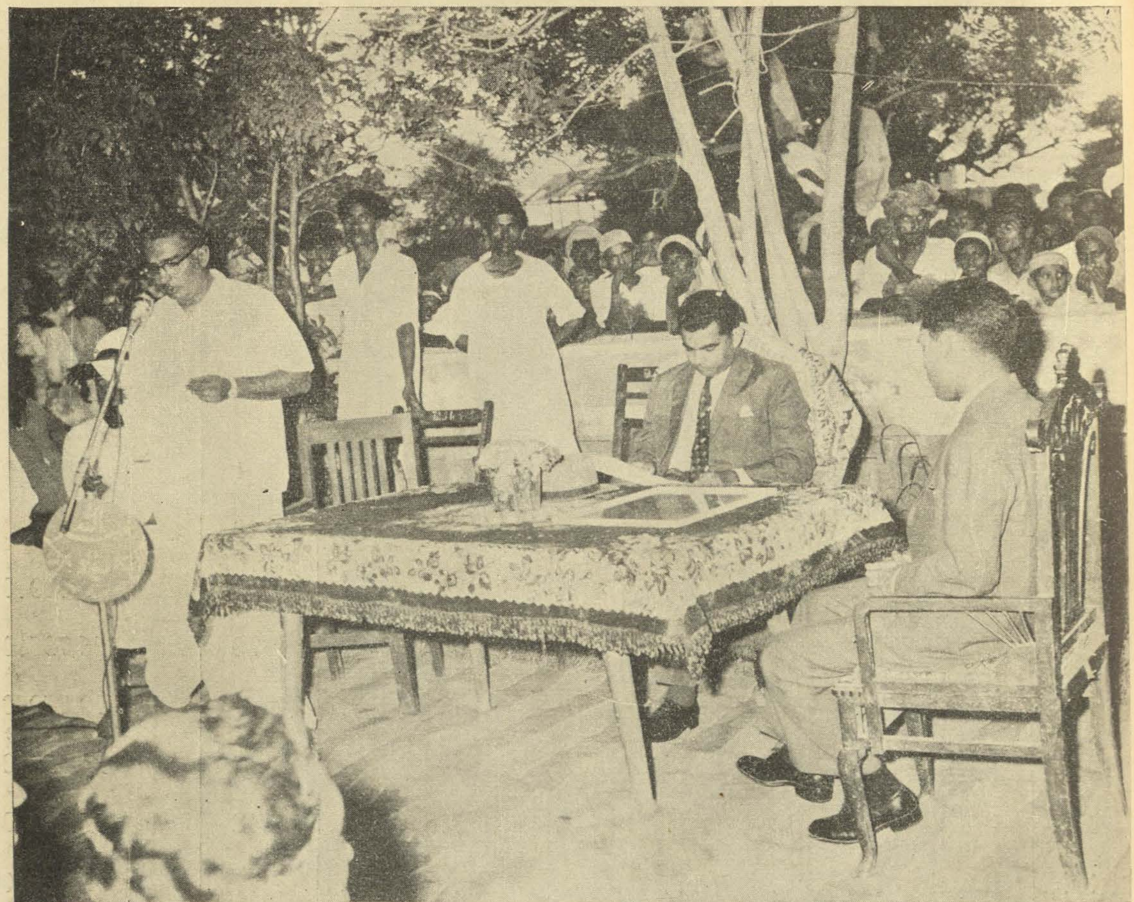
Rs. 50,000.00 (Rs. 25,000.00 sanctioned out of PL. 480).

8. Construction of three quarter for Sweepers at an estimated cost of Rs. 3,000.00.

9. Construction of a market at an estimated cost of Rs. 21,000.00.

The Union Councils of this district have undertaken the following development schemes either from their own funds or from the funds sanctioned by the Divisional Councils during the last three years.

Serial No.	Name of the Project.	No.	Total cost.
			Rs.
1.	Roads (Kacha)	2	10,120.00
2.	Causeway	1	5,400.00
3.	Protective bunds	6	11,000.00
4.	Musafirkhanas	4	7,780.00
5.	Medical Dispensaries	9	95,600.00
6.	Indoor Patient Ward	1	4,000.00
7.	Maternity & Child Welfare Centres	3	22,200.00
8.	Club with Tennis Court	1	5,000.00
9.	Water Tanks	20	66,735.00
10.	Pacca wells	49	90,250.00
11.	Hand Pumps	150	94,050.00
12.	Markets	12	35,189.00
13.	Repairs of wells..	15	2,400.00
14.	Public park	1	2,000.00
15.	Slaughter house	1	500.00
16.	Drainage	1	1,000.00
17.	Pipe Line	1	3,000.00
18.	Nakas	2	4,000.00
19.	Bridge	1	400.00
20.	Library	1	20,000.00
21.	Shopping Centres	2	1,45,000.00
22.	Construction of Union Ghars	19	1,90,000.00



Chairman, Town Committee, Mirpur Bathoro, presenting the Address of Welcome on the occasion of the foundation stone laying ceremony of Shopping Centre.

The Government have also opened the following Primary schools through Basic Democrates during the past three years at the cost shown against each :—

Year	NUMBER OF SCHOOLS			Amount sanctioned per School	Total amount sanctioned.
	Boys	Girls	Total		
				Rs.	Rs.
1960-61 ..	60	8	68	1,000.00	68,000.00
1961-62 ..	30	15	45	3,350.00	1,50,750.00
1962-63 ..	46	21	67	3,350.00	2,24,450.00
Total ..	136	44	180	7,700.00	4,43,200.00

Rural Works Programme.

The total allocation made to this district is Rs. 14,90,000.00 out of which Rs. 90,000.00 has been earmarked for expenditure on establishment and contingencies. Out of the balance of Rs. 1,40,000.00, 25% equal to Rs. 3,50,000.00 has to be paid to the District Council as its share and leaving Rs. 50,000.00 in reserve for emergency development, the net amount available for development work comes to Rs. 10,00,000.00 (Rupees ten lac) only.

In all ninety four schemes of the total cost of Rs. 13,73,800.00 are under implementation and out of these two schemes worth Rs. 1,20,000.00 are exclusively being executed by the District Council while the remaining ninety two schemes of the total value of Rs. 12,53,800.00 are being executed by the thirty five Union Councils and two Town Committees of the District. The amount of Rs. 1,20,000.00 to be spent on the District Council schemes is from its own share of Rs. 3,50,000.00 and the balance is proposed to be utilized on the appointment of staff for Schools and Dispensaries provision of furniture and equipment and incurring of recurring expenditure etc.

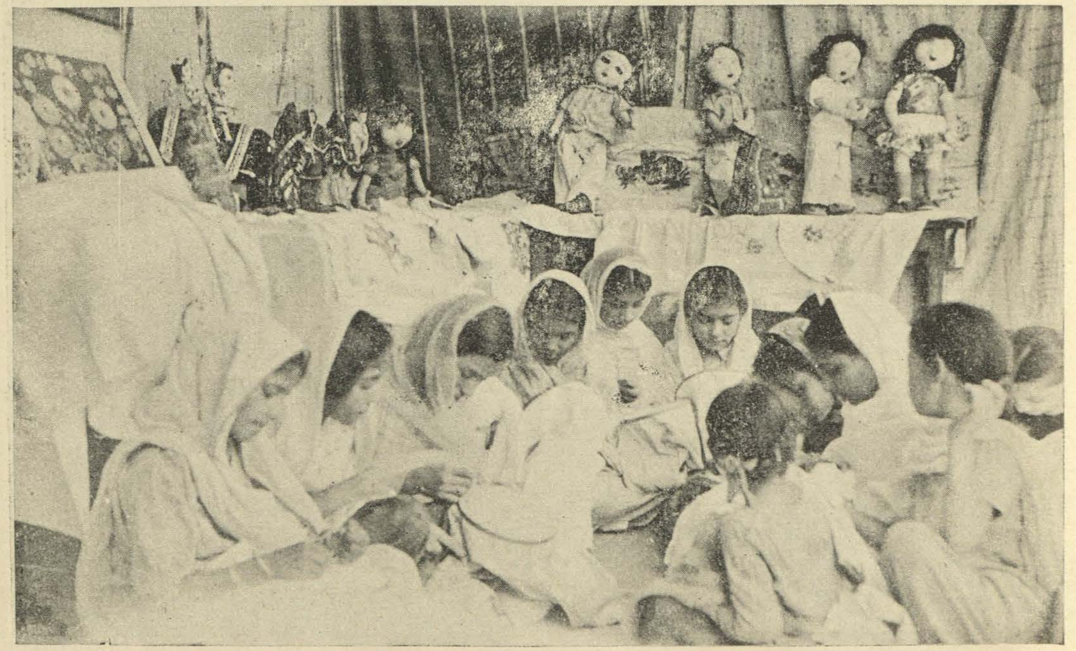


The Deputy Commissioner replying to the Address of Welcome.

For the ninety two schemes of the Union Councils against the total cost of Rs. 12,53,800.00 the funds provided from the PL-480 grant are to the extent of Rs. 9,31,950.00 while the Union Councils have to provide matching funds to the extent of Rs. 1,86,500.00 and Rs. 90,000.00 is the contribution to be made by the District Council. The balance of the cost *viz.,* Rs. 45,350.00 is to be met from public contributions of Rs. 40,000.00, Red Cross donation of Rs. 2,000.00 and Government grant of Rs. 3,350.00.

The allocation made to the Thatta and Shahbunder Sub-Divisions is as under: —

Sub-Division	No. of scheme	Allocation From PL. 480 Fund
		Rs.
Thatta	53	5,29,950.00
Shahbunder	39	4,02,000.00
Total ..	92	9,31,950.00



Girls of Ladies Industrial Home, Mirpur Bathoro, busy in their work

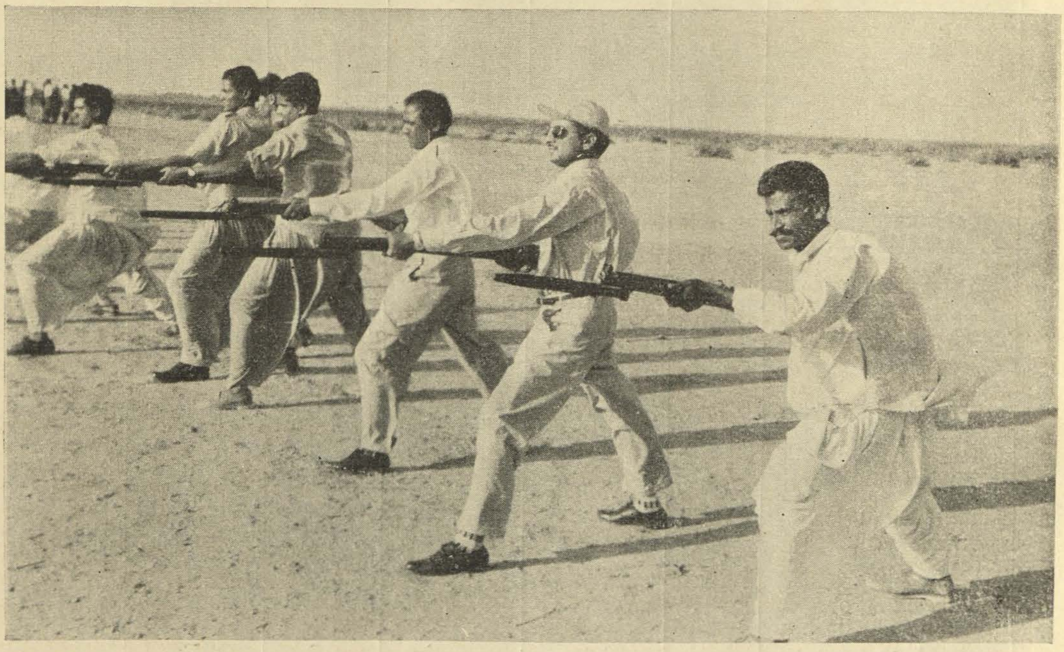
There remains a balance of Rs. 1,18,050.00 inclusive of the reserve amount of Rs. 50,000.00 and this is proposed to be utilized on few more schemes like construction of link roads and water supply schemes of which further programme will be chalked out shortly in the fourth and final phase.

The total estimated cost of various projects shown sector-wise is as under:—

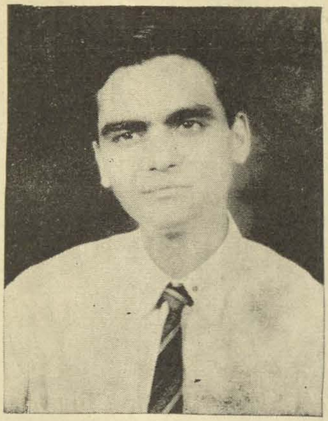
Sr. No.	Sector	Number of schemes	Total estimated cost.	Allocation from PL. 480.	Contribution by District Council	Contribution by Union Council	Other contribution.
1	2	3	4	5	6	7	8
1	Schools	8	2,56,700.00	2,43,350.00	..	10,000.00	3,350.00 Government Grant).
2	Medical (Dispensaries including T.B. Clinic)	8	2,04,000.00	1,27,000.00	20,000	15,000	40,000.00 (Public contribution). 2,000.00 (Red Cross donation)
3	Minor Irrigation Works	1	20,000.00	20,000.00	..	..	..
4	Rural Roads ..	2	12,000.00	12,000.00	..	..	..
5	Drinking Water Supply Schemes	47	3,29,100.00	3,07,600.00	..	21,500	..
6	Village Improvement and sanitation schemes.	4	70,000.00	5,000.00	15,000	5,000	..
7	Community Buildings	4	2,25,000.00	1,25,000.00	50,000	50,000	..
8	Minor Drainage Schemes ..	includ-ed insS. No.6)	20,000.00	15,000.00	5,000	..	..
9	Culverts	1	7,000.00	7,000.00	..	..	..
10	Other schemes (Rest House and Union Ghars).	19	2,30,000.00	145,000.00	..	85,000	..
	Total ..	94	13,73,800.00	10,51,950	90,000	1,86,500	45,350

The above schemes have provided opportunity to the thousands of labourers to earn their livelihood and will go a long way to satisfy the needs of the people in the Rural areas.

The implementation of the above schemes is in full swing. Many of them have since been completed and it is expected that by the end of June 1964 about eigthy scehemes will be fully implemented.



Mujahids of Sujawal undergoing the training of Bayonet Fighting at the Mujahid Force Training Camp.



SCOPE OF BANKING

M. A. REHMAN,
Manager, National Bank of Pakistan,
Thatta (Branch.)

Credit in early Days.

In Europe as well as Indo-Pak Sub-continent the ground for modern banking was prepared by the money lenders and goldsmiths who received deposits and gave loans on high rates of interest. Large sums of money were left with the goldsmiths for safe custody, against their signed receipt, embodying undertaking to return the money to the depositor or to the bearer on demand. The gold-smith's receipt or note became payable to bearer and was gradually transformed in to a bank note, thus forming the foundation of issue and deposit banking.

With the evolution from barter to money economy, from the self sufficiency of good old days to keener struggle for existence, the growing economy could not do without the institution of banking for any considerable time. The present day bank has to assure numerous functions of the complex economic and financial structure. The result being that the wheels of industry and trade to day cannot move ahead without the help and co-ordination of the banking institution.

Impact of partition.

In the wake of partition, banking and credit were greatly disrupted due to sudden disappearance of village Banias. The institional source of credit *i.e.* commercial banks were also virtually paralysed. But soon after the establishment of State Bank of Pakistan on July, Ist 1948, the banking machinery started recovering its lost ground. It is heartening to note that the commercial banking during the last decade has made tremendous progress. Almost all the big cities to-day are crowded with large number of banks and their branches.

Thatta Lags behind.

The district of Thatta, however, lagged far behind. There is only one Commercial Bank *viz.*, National Bank of Pakistan, three branches of Co-operative Banks and one Branch of Agricultural Development Bank of

Pakistan, in the whole of Thatta District. The total deposit (private sector) of these banks are estimated to be about Rs. 15 lacs which is an indication not only of a very low saving capacity and general antipathy to keep savings in banks.

Agriculture.

The low liquid savings of the people is due to the area being less developed as compared to other areas of the neighbouring districts.

Out of the total population of the District *i.e.,* 3,61,733,94.23% is rural and 5.77% is urban. The structure of economy is, therefore, essentially agricultural. And since the agricultural land in the district is mostly waterlogged and effected with salinity, the tillers of the soil reap very low yield.

The financial position of the masses having small agricultural holdings, is further aggravated by lack of organised mandies or markets where the agricultural produce could be sold at open rates. The producers have, therefore, either to sell low or go after loans from Traders at very high rates.

Industry.

In the industrial sphere the district is all the more unfortunate. Apart from a dozen or so, Rice mills of small to average scale, and a few dwindling units of cottage industry of Lungee and Ajruk, there is no industry worth the name being run on commercially sound basis.

The picture of the economic condition seen through the above lines appear very grim and discouraging. But it is a matter of great consolation that the agricultural sphere is of late getting due attention by the Government through its different agencies and the areas which were out of cultivation and which had low yield, are expected to give better harvest after the water logging is controlled by digging huge drains.

The question of large scale industry is also engaging attention of the Deputy Commissioner, Thatta who has already recommended for setting up of a number of industries in the District during the 3rd Five year plan. Much of the quick pace of development work in the district is due to his keen interest. It might not be very long before the district may have a few industrial units under his dynamic guidance.

Prospects of Banking.

The institution of banking depends on the Savings or liquid money of the community and on channelising the same through its credit policy for productive purpose, thereby raising the tempo of economic activity and prosperity. Since both these broad based activities of the bank had limited scope in the prevailing circumstances the extension of banking in the district has not so far been very encouraging.

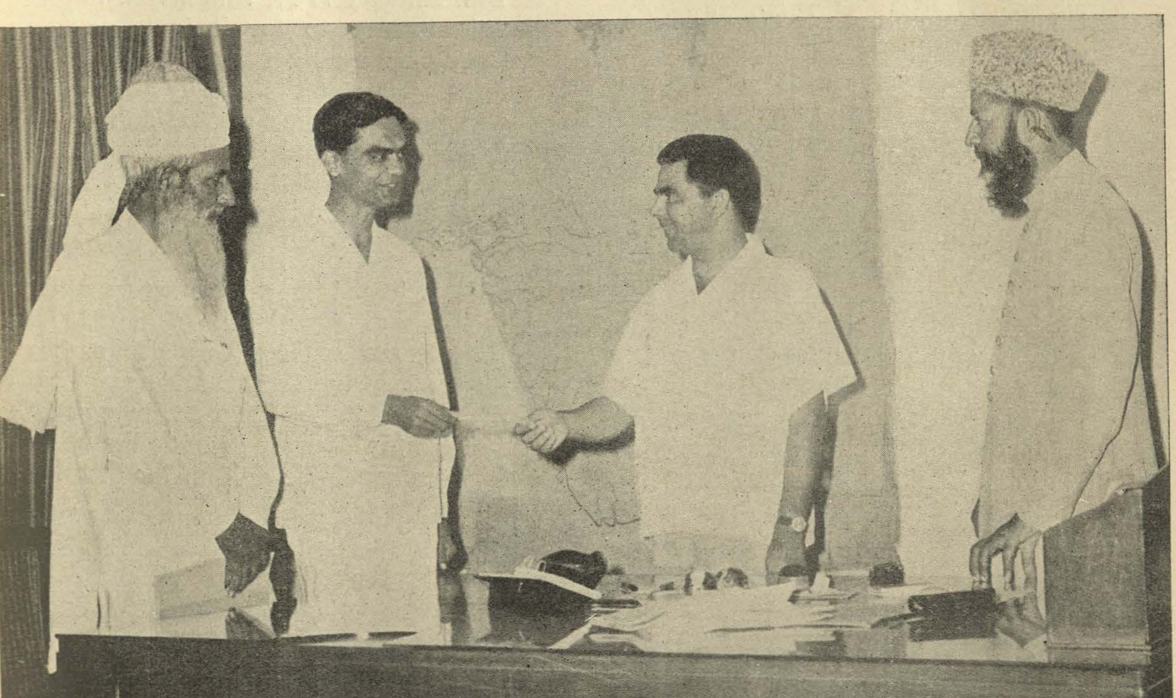
The agricultural sphere is now gradually improving and with that the general economic activity. Therefore it is confidently expected that the pattern of things will be considerably improved when it would be possible for the banking institution to push forward the wheels of economic activity and give it a momentum.

The Credit Enquiry Commission set up by the Government has fully

taken into account the demands of less developed parts of the country and has identified two major problems in the field of Commercial banking (i) The geographical coverage of banking facilities (ii) The concentration of bank credit.

As regards (i) while it was recognised that substantial progress in opening of banking offices has been made the pace of growth in certain less developed parts of the country was not found satisfactory. It was pointed out that there is one bank office for 7000 and 4000 people in USA and UK respectively, as compared to one office for a population of about 89,000 in Pakistan.

In respect of (ii) the Commissiont found a striking disproportion between total credit extended to the largest loan accounts and the small accounts committed for loans below Rs. 25,000.00. While it was recognised that the pattern of credit is determined by the factors beyond the control of the bank as has been explained it was recommended by the Commission to adopt measures to direct the flow of credit to small investors.



Manager, National Bank, Thatta Branch, presenting a Cheque of Rs. 10,000/- to the Deputy Commissioner as Bank's donation for the construction of Makli Mosque and Darul-Uloom

Expansion of National Bank of Pakistan.

Keeping in view of the recommendations of the Commission, the National Bank has drawn up a programme to open as many branches as possible within the shortest period and the less developed areas. As such in

L (iv) 432—7

the district of Thatta, it is expected that at least three more bank offices will be opened within this year. Like-wise the expansion programme is going ahead in other parts of the country at an accelerated pace.

Credit Expansion.

To avoid concentration of wealth it was found necessary by the Credit Enquiry Commission to divert the flow of Bank Credit from the class which is on sound footing in Commerce and Industry and can furnish adequate security, to small investors. With this purpose in view a People Credit Corporation was proposed to be set up by the Commission.

This proposal has, however, been implemented by the Government by entrusting the objectives of the Corporation to the National Bank of Pakistan under the able and spirited guidance of its Chief Executive. National Bank of Pakistan, as it had come to rescue to Jute and Cotton crisis of 1949 and 1950 respectively, will this time also achieve the objective with greater success through the great net work of its offices throughout the country.

A Peoples Credit Department has, therefore, been set up in all the offices of the National Bank of Pakistan *w.e.f.* 16th January 1964, with a view to provide finance to Small Industry and trade on more liberal terms and conditions. The work is already in progress and the stir it has created among the Small traders and industrialists as discernable in all the offices of the bank, is very encouraging.

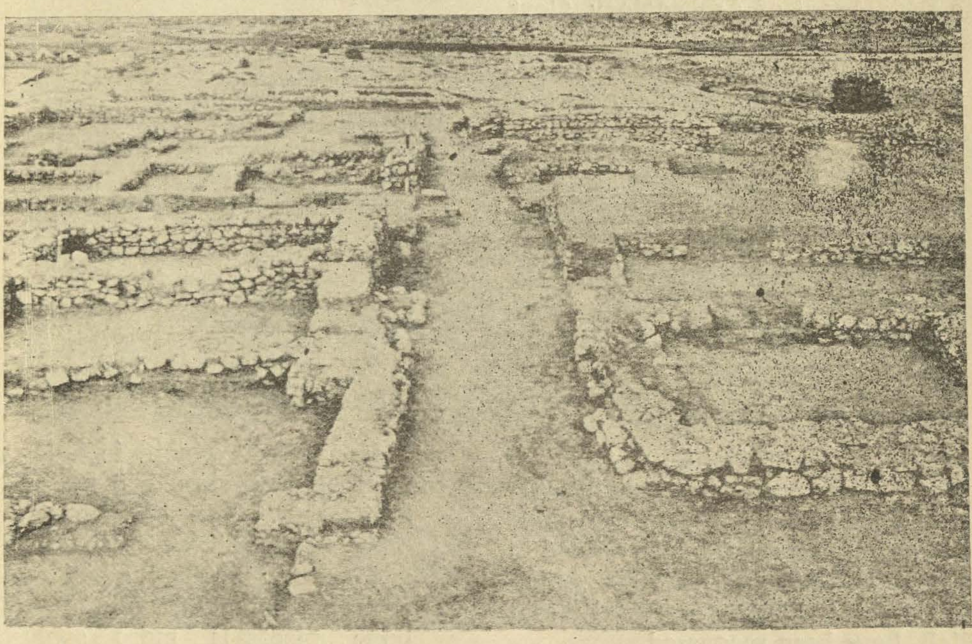
It is hoped that by bringing credit facilities to a really large number of people, the scheme will give a new direction to the economic development of the country. Let us wish a great success to this major step in the banking and economic field of the country.

BANBHORE

(By the courtesy of the Department of Archaelogy, Government of Pakistan.)

The BANBHORE popular by known as Bhambhore site is situated on the northern bank of the Gharo creek of the Arabian Sea, about 40 miles east of Karachi on the highway to Hyderabad in Thatta District. The site conceals the remain of a considerable settlement. It is ideally situated to have been a part of some importance, once connected with the interior of the country by a branch of the river Indus. Some scholars and historians have suggested its identification with DEBAL, the famous port which fell to the young Arab General Muhammad Bin Qasim in 712 A.D.

The purpose of the investigation at this site has been to determine the origin of the settlement as well as to reveal something of the life and culture of the early Muslim settlers in Sind in the beginning of the 8th Century A.D. The results achieved so far are quite interesting and encouraging. As a result of excavations significant discoveries have been made and important facts have come to light; a wealth of material objects have been recovered and a vast area has been uncovered revealing the defensive systems, town-planning and details of archi-



A general view of Banbhore excavations.

tecture. On the basis of the material recovered, it has been clearly established for the first time that this site covers two distrinct periods of history-the Muslim and the pre-Muslim.

Origin of the Settlement.—In the past, attempts had been made first in 1930 by Mr. N. G. Mujumdar and again in 1951 by Mr. Leslie Alcock to determine the origin of the settlement. Mr. Majumdar, who dug a few trenches in different areas of this site, was of the opinion that the settlement was substantially of one period and that there was no evidence of any pre-Muslim occupation there. Mr. Alcock of the Department of Archaeology, Govt. of Pakistan, undertook preliminary excavations. His investigations showed that the town which flourished at Banbhore was of Arab origin and that there was nothing to identify it with Debal.

Muslim Period.—The Muslim occupation of Banbhore appears to have lasted from the 8th to 13th century A.D. The first Muslims to appear on the scene were Arabs, and as evidence of that, a unmber of Copper coins of the tenth Umayyad Caliph Hisham-bin Abdul Malik, a type of pottery which used to be made in Syria during Umayyad times and the most significant of all a gold coin minted in Egypt in Hijra 229 of the ninth Abbasaid Caliph Abu Jaffer Harun-al-Wasiq Billah, have been recovered.

Pre-Muslim Cultural Material.—Immediately below the Muslim period occupation levels the present excavations have revealed unmistakable cultural material of non-Muslim origin. This material includes fragment of plain and painted pottery storage jars bearing shrot inscriptions in the Proto-Nagri style of the 8th century A.D. A major development in search of the origin of Banbhore settlement is the unexpected discovery of cultural material which takes the history of the setlement to the beginning of the Christian era and beyond. Digging in different sectors at a depth of 25 feet from the surface the excavations have revealed red burnished pottery of the Sytho-parthin period which extended from the 1st century B.C. to the 1st century A.D. The discovery of Scytho-Parthian cultural material at Banbhore, therefore, opens a new chapter in the history of Pakistan and this is the first time that evidence of this culture has come to light near the Arabian Sea coast.

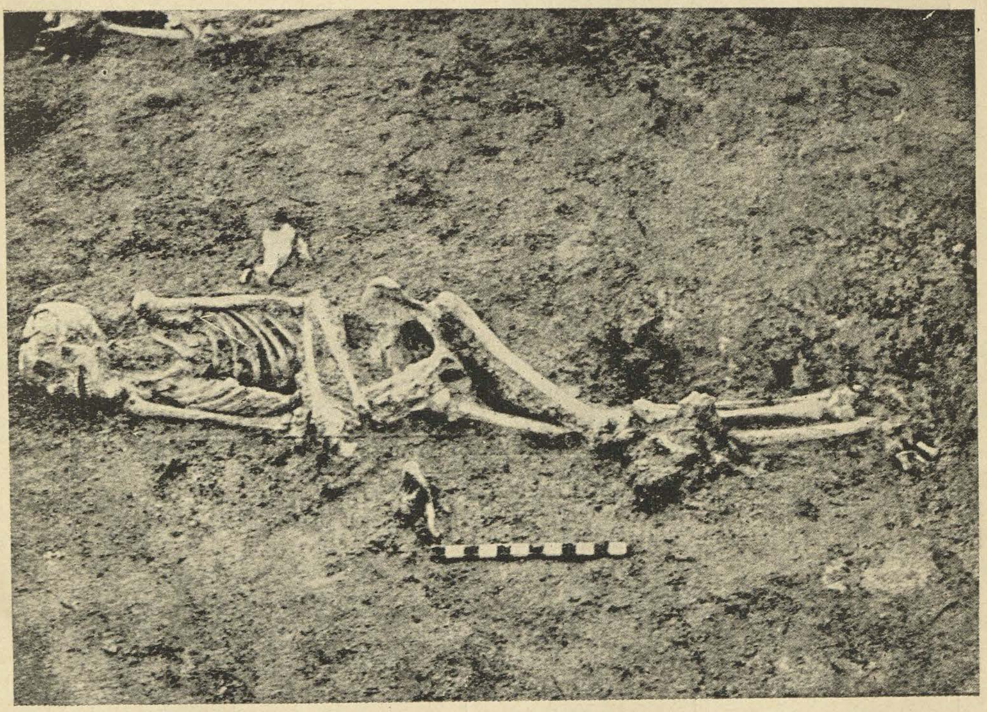
Important Buildings:—Among the important structural remains uncovered are the city defences and embankment; three gateways; anchorage and a large size public building with a round corner and large stone built well.

Finds:—Copper coins of various denominations recovered from different levels represent the largest number. Other copper find include bangles. finger rings and antimony rods.

Iron objects which include mostly mails, hinges, rings and hooks, arrowheads, knife a sword-hilt are interesting finds, Glass articles are badly broken and decayed but show a high quality of craftsmanship. Work in Ivory and bone pieces is more sophisticated and delicate. The specimen represent mostly handles, rings, bangles, combs and other ornaments and decorative pieces.

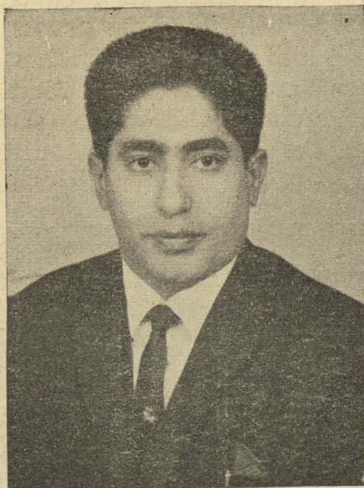
This large ensemble of objects both artistic and of every day use, expected to furnish detailed information on the cultural development of early Islamic Sind.

The End of Banbhore.—Banbhore settlement appears to have come to a sudden end following a violent distrubance in the 12th 13th Century In different parts of excavations a large number of human skeletons have been unearthed lying scattered in disorderly manner in houses and streets some with iron arrow-heads embodied in them. The floors on which they lie are thickly covered with ashes and charcoal. The bricks and stones fellen from their structures also strongly suggest a great disturbance. The stones and bricks of the houses when set on fire by some invaders were scorched red due to the effect of intense buring. Unless the skeletions and the houses were distrurbed later by some natural phenomenon, it is difficult to believe that the dead were buried inside the residential quarters and in the streets in peace time.



Human Skeleton found during Banbhore excavations.

—:-O-:—



BUILDINGS AND ROADS

SH. ASIF ALI

Executive Engineer (B&R)
Thatta Division, Thatta.

The Thatta Buildings and Roads Division is responsible for the maintenance and construction of Buildings pertaining to Health General Administration. Education and Police Department. The works of Police Department are only handled after specific allotments are received from them.

This Division is also responsible for the maintenance of West Pakistan Highway from Mile 28/4 to 120/0 and Thatta Jungshahi Road measuring 102 actual miles and 128 virtual miles.

Besides above the maintenance and renovation of Shahjehan Mosque, Thatta, has also been entrusted to this Division.

Buildings.

The construction and extension works of the following Buildings pertaining to various Departments are being executed by this Division.

Serial No.	Department.	Buildings.	Location.	Estimated cost.	Remarks.
				Rs.	
1	Health Department ..	50 Bed Hospital.	Sujawal. ..	13,58,000	Nearing Completion
2	Do. ..	Rural Health Centre.	Mirpur Sakro ..	3,42,000	Do.
3	Education Department ..	Government College.	Thatta Total 1st phase. ..	15,00,000 3,26,176	Completed.
4	Do. ..	Normal School and Hostel.	Mirpur Bathoro ..	2,27,150	Do.
5	Do. ..	Government High School.	Sujawal ..	3,00,000	Nearing Completion
6	Do. ..	Govt. High School..	Mirpur Bathoro ..	1,93,000	Do.
7	Do. ..	Upgrading of Govt. Middle School to High School.	Mirpur Sakro ..	40,000	Completed.
8	Do. ..	Upgrading of Pry: School to Middle School.	Makli Thatta ..	30,000	Do.
			Gharo ..	30,000	Do.
			Buharo ..	30,000	Do.
			Ladiun ..	30,000	Do. to be started.
9	Do. ..	Industrial Arts Centres ..	Govt. Middle Schools		Completed.
			Jhampir ..	6,000	Do.
			Gharo ..	6,000	Do.
			Makli .	6,000	Do.

With this net work of Education Institutions sanctioned by the Government the District Education can reasonably be expected to spread far and wide and serve excellent take off for this comparatively backward area.

Storage Accommodation.

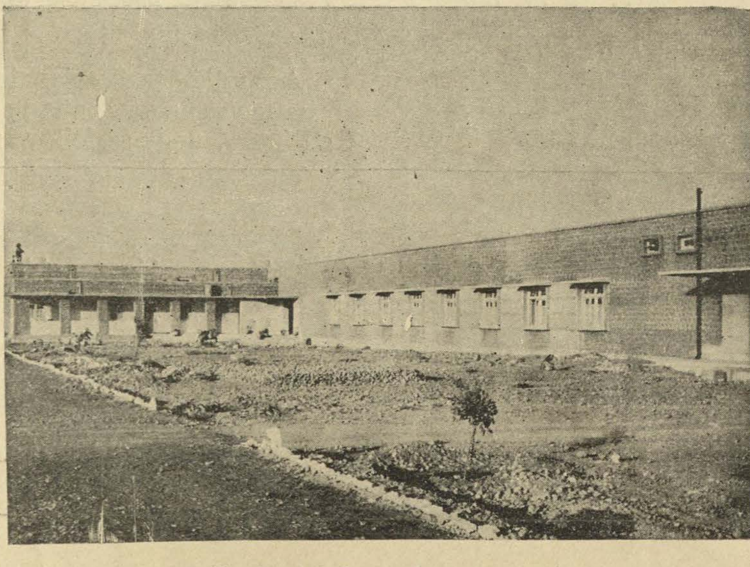
Graingodown have already been constructed at Thatta, Mirpur Sakro, Sujawal, Mirpur Bathoro and Jati in this District. To enhance the storage capacity and thereby ensure adequate stock of food-stuffs, the Government has recently sanctioned further construction of Grain Godown of 2,000 Tons capacity at Thatta and 1,500 tons capacity at Sujawal. The works have been administratively approved for Rs. 2.70 Lacs and 2.02 Lacs, respectively. The allotment in the current financial year is Rs. 67,000/00 and 50,000/00 respectively and works are expected to be started very soon.

Due to inadequate means of communications non-availability of Buildings materials locally, particularly in Shah Bunder Sub-Division, and scarcity of skilled labourers and local contractors, the cost of construction in this District is comparatively higher. However it is satisfying to record here that works are coming up well and progress is good.

CONSTRUCTION OF DISTRICT HEADQUARTERS AT MAKLI HILLS.

Originally Thatta was part of Karachi District. After separation of Karachi City with its suburbs from former Sind Province in 1948, Thatta District was created with its Head Quarters at Karachi as no accommodation was then available at Thatta.

Subsequently, shifting of Head Quarters to Thatta was considered essential and the then Sind Government accepted the proposal of contruction of new District Head Quarters Township at Makli (Hashimabad) in 1951.



A view of the newly constructed College Building.

It was orginallay proposed to complete the Construction in 3 phases. Later on the scheme was desired to be executed in 2 phases as under: — first phase was started in 1957 and has been completed at the total cost of Rs. 29,57,671/00.

Estimated cost of 1st phase. (To be completed by 31st March 1959)			Estimated cost of 2nd phase
		Rs.	Rs.
1. Residential	..	12,62,400.00	18,77,900.00
2. Non-Residential	..	7,53,101.00	3,71,509.00
3. Development	..	9,10,000.00	10,23,000.00
	Total ..	29,25,501.00	32,72,409.00
14 % Cartage Charge	..	4,09,570.00	4,58,137.00
	Total ..	33,35,071.00	37,30,546.00
Add for 1st Phase	..		33,35,071 00
	Total ..		70,65,617.00
	Say Rs. ..	70,65,600.00	

The Government have administratively approved the construction of the residential and non-residential buildings for the 1st phase at Rs. 30,00,000.00 including Development Charges. The administrative approval for 2nd phase is still awaited. The work of

The township at Makli hills, Thatta not only provides construction of Government Buildings but also caters for developing sites for public use.

According to the planning for the entire township at Thatta has been divided into 4 units as follows: —

		Acres.
1st Unit	.. ..	280
2nd Unit	.. ..	132
3rd Unit	.. ..	105
4th Unit	.. ..	115
	Total ..	632

Out of the above, Unit No. 1 has been reserved for Government Officers and residential buildings including Hospital and College etc, the rest 3 units are for public.

The number of plots fixed in different units for public is as follows:—

was later on maintained to suit the then traffic conditions.

Subsequently it was observed that the road passes through water-lodgged and Kallar affected area. The extensive increase in load traffic, increased load carrying capacity of trucks and interception of existing drainage lines

	Size of Plot.	Unit No. 2.	Unit No. 3.	Unit No. 4.
1.	1,000 Sq. Yards	64	30	17
2.	600 Sq. Yards	87	191	66
3.	300 Sq. Yards	144	12	178
4.	150 Sq. Yards	200	15	350
	Total ..	495	248	611

The provision for reservation of plots for residents of Thatta town, at no profit no loss basis, has been accepted by the Government. But no public buildings has so far been constructed.

An estimate for General Development, amounting to Rs. 69,00.000/00 was prepared for units 2, 3 and 4. The matter for permission to sale plots by auction to General Public is under correspondance between Deputy Commissioner and Board of Revenue West Pakistan.

ROADS.

The Karachi Kotri Road was originally constructed as a war emergency road in 1941-43 and various specifications were used in different reaches. The pavement on average was 4 inches thick and 10 feet wide. This

under G.M. barrage scheme further aggravated the already low-standard road. The incessant rains in 1961 considerably damaged the road. These conditions conspired to cause a total failure of the road from Mile 38/0 to 98/0 in 1961. The road was accordingly closed for heavy traffic and it was decided in a Higher Powered Committee Meeting held at Hyderabad in September, 1961 to recondition the road emergently. It was also interalia decided that the speed of trucks may be controlled by installation of special meters in the trucks and weight bridges at Kotri and Gharo to prevent over loading.

A sum of rupees 42 Lacs was allotted for the proposed reconditioning of the roads to last 2 to 3 years. Reconditioning of the road started in November, 1961. The work was hand-

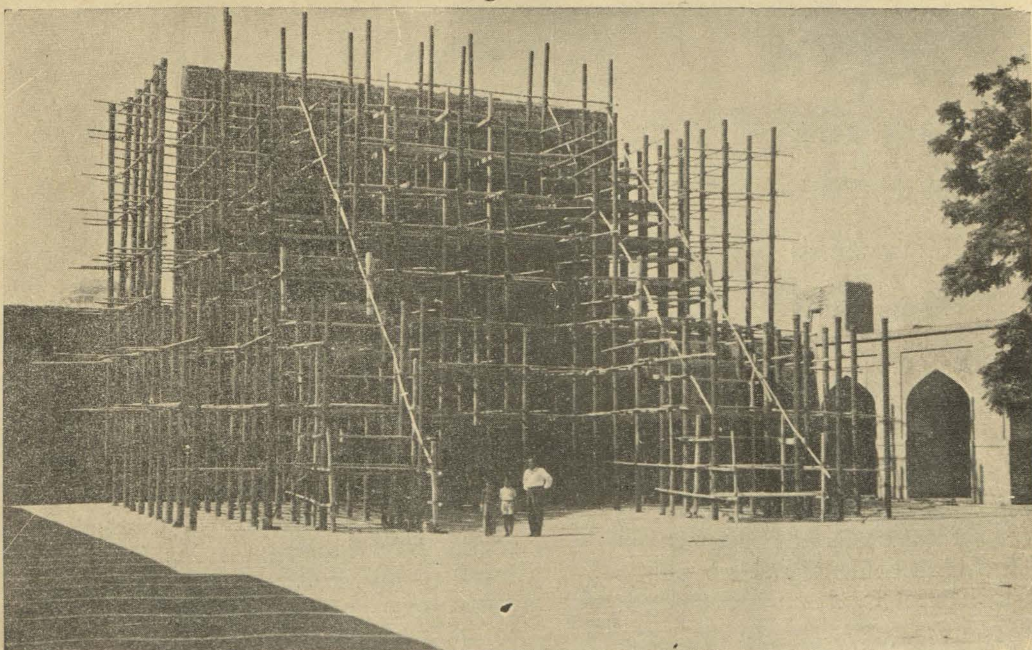
led on emergency basis. The road was reopend to all types of traffic after one coat of apray grout within a period of less than 6 months on 16th April, 1962. The carpeting of the road in 52nd miles was also done. In view of the fact that the truck continued to ply at 50-60 miles per hour and carry loads about 3 feet higher than the body of the truck it is satisfying to note that at the end of nearly 2 years the Highway continued to withstand the onslaught of unmitigated traffic successfully.

The Thatta Jungshahi road is 11 miles long and considerable repairs have been carried out to maintain and improve this important link between Jungshahi Railway Station and District Head quarters.

RENOVATION OF SHAHJEHAN MOSQUE AT THATTA.

This division is also incharge of revovation work of the historical monument, Shahjehan Mosque. at Thatta. This mosuqe was built in the years 1644. The work was orderded by Emperor Shahjehan to commemorate his stay at Thatta while under disfavour of his father emperor Jehangir, and was completed during the early reign of emperor Aurangzeb. This is the biggest Mosque in the part of the country and is unsurpased in beauty for its mosaic and enamelled-tile work, and accoustics of the structure.

The Mosque is in the form of a quandrangle measuring 307 feet EWX 171 ft. NS, a heavy fine brick's struc-



A view of the scaffolding for the main Mehrab of Shahjehan Mosque.

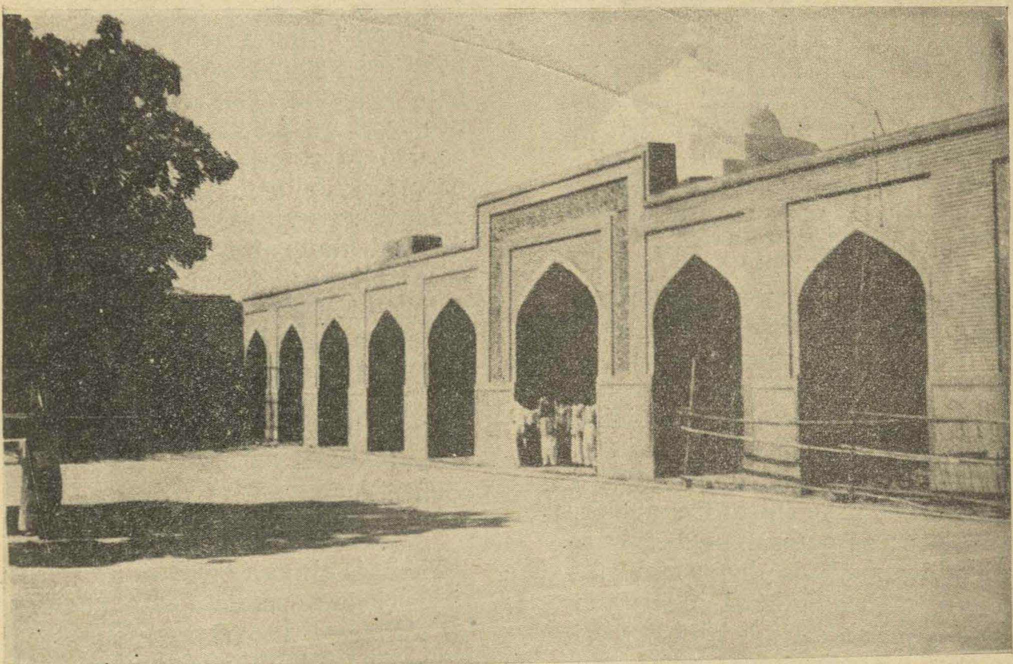
ture of elegant construction. This royal work of great cultural heritage had fallen into ruins due to devastating effects of salt-petre and passage of time. Two major repair are recorded during the British-raj, but the repairs seem to have been aimed at preserving the monument structurally rather than restoration of the original eclat. The question of repairs was first taken up by the Government of the former Province of Sind for which a Sind Mosque and Hostel Fund was also collected by levy of cess on Muslim land-owners at the rate of one pie (old) per rupee of land-revenue and Rs. 5,82,630/00 were collected for the purpose.

The entire work of renovation is now estimated to cost Rs. 15,59,400/00 and comprises, besides renovation work of layout of a garden on Shalimar Pattern, 100 ft. wide NS and 400 ft. on the East side, electrification of the Mosque, abulution arrangements for the ladies and gents besides water supply and sewerage.

The expenditure on the work so far is Rs. 4,35,400/00. An Amount Rs. 5,50,000/00 have been allotted by the Auqaf Department for the first time in the current financial year since this work was taken in hand and it is now expected that the work will gather momentum to early completion.

The work is being executed with full consultation and advice of Archaological Department of Government of Pakistan. Luckily there still are a few families scattered in Naserpur. Hala and Naushahro-Feroze who can execute the old enamelled and Kashi work. These artisans are very jealous of their trade and refuse to divulge the secret of their dying art, inspite of persistant efforts.

The work is of very labourious and time consuming nature. It was started in 1959, and subject to availability of funds, is likely to take 2-3 years for completion.



A renovated wing of Shahjehan Mosque.



COMMUNITY DEVELOPMENT

G. M. SHEIKH,
Sub-Divisional Magistrate,
Shah Bunder Sub-Division, Thatta.

The term Community Development is now so widely used and frequently applied in varied situations that it had become necessary that the term should be adequately defined in order to understand it clearly with a view to appreciating its significance in a particular context.

As popularly accepted, Community Development is defined as a movement designed to promote better living for the whole Community with the active participation and on the initiative of the community. Professor Carl C. Tylor while describing "What is Village AID", has defined Community Development as a term used only to describe the methods by which the people who live in local villages or communities become involved in helping to improve their own economic and social conditions and thereby become effective working groups in programmes of national development. Thus Community Development programme essentially aims at promoting development in various aspects of the life of a village or community and hence the form which it takes and organization developed to carry it out, depends to a large extent on local thinking and circumstances.

Through the Community Development programme is meant by and large for improving living conditions of the people of rural areas, yet it is as much needed to change the lot of urban people. No doubt people living in villages deserve more attention and demand more help; but the socio—economic conditions prevailing in Souths—Easts of the cities do not present a happy picture. Thus there is a need of the time that the Community Development programme should be introduced in villages and cities, in under-developed as well as in advanced countries.

There is also an increasing tendency of restricting operation of Community Development Programme mostly in economic field. In most of the Eastern Countries, under Community Development Programme, entire stress is being laid on material developments. No doubt the problems of both National and Individual economic advancement are upper most in many people's mind at the present time. But by giving too much emphasis over this aspect, we are gradually ignoring altogether the most important and vital aspect *viz.*, 'Human Aspect'. By deve-

lopment, we usually talk of bricks and mortar, but not of man. We are anxious to have buildings and bridges, tunels and towers, built, but never care to have a look at the 'builder'. In fact lasting change could only be achieved and the process of development could only continue, when we have developed the 'man' who is the builder—a creater in his own world. This lack of concern about human aspect, has inevitably resulted into big failures and frustrations. "Human investment" and 'Human Capital' is a pre-requisite for economic development—a pre requisite that is even more important than investment in conventional capital equipment. The experience gained through carrying out Community Development Programmes and research made in the process of Community Development firmly state the ultimate hope of a country rests with its people, who are capable of:

Defining their own problems.

Determining solutions

Deciding actions and

Implementing the decisions.

Thus any material development lies in the development of human resources alone. The people form the most essential and vital element. The Community Development Programme itself pre-supposes that there is a Community that is going to be developed. The programme naturally cannot be conducted in a vaccum. The pre-requisite for such programme is the existence of a community—that is the people living within a defined area or locality. People living in comunity or village have always some common interests. and goals that demand common action. Fortunately for us, our entire nation is divided into innumerable communities Practically every village forms a community—having common habits and customs, common problems and interests,. common hopes and aspirations.

So when we talk of conducting Community Development Programme, we naturally mean that the people who live in villages or communities are to be developed. They are to be changed. Man being most complex being, it would essentially require person of very high calibre to work with the people to bring about the desired changes in them. It is indeed a tough job to effect a change in a given situation. Hence this Agent of change should be one—having outstanding qualities. He should possess tact and talent-skill and intelligence and above all he should be sincere to the cause and enthusiastic about the job. Personality of the worker always plays a vital role and often proves a deciding factor. Success could only come, when the worker applies the requisite skill, adopts proper technique and puts in the sincere efforts. All this is essential to break the ice. When once people are changed, then chain of reaction takes place and advancement comes in big strides. Change is of permanent nature assuring progress and prosperity of the country. This phenomenon could be impressively appreciated by mentioning even a simple example. If the worker succeeds in changing the habit of farmers to use chemical fertilizer there would not only be a bumper crops augmenting our economy; but there would crop up factories for manufacturing fertilizer to cope with the demand and this will encourage the allied factories and so on, thus setting in the chain of reactions. But if we do not change the habit of farmers, but straight away

supply them chemical fertilizer and enforcing its use, no material gain could be expected. With the passage of time the farmers would abandon the scheme altogether, with a sharp set-back in the economy.

Thus it is a proven fact that without proper Agent of change, no desired change could be brought about in the people and without changing the people, no permanent development could ever be brought. So in carrying out the Community Development Programme, first and formost requirement is the selection of right type of worker. This is a deciding factor. If we fail in getting the real worker, we will fail in the programme.

Here, in this district of Thatta also, an experiment was made, and was met with failure. It is indeed a sad story to tell. The failure has left scars that will serve as signs of caution to future travellers. In the year of 1957, Village AID programme was started in taluka Mirpur Sakro. All preliminaries were observed—general survey of the area was made—conditions of the people were studied—local officials were consulted etc. All was done, but one vital factor was over looked. The area, being at far off distance from the Head-quarters with meagre means of transport and communications, presented a peculiar problem. The situation demanded the careful and proper selection of workers specially that of the Development Officer who was to be in charge of the entire programme. Very able and devoted person should have been posted. This was unfortunately not done and the ommission proved fatal. There were enough material resources viz money and equipment. There were human resources people who needed a change But there was no worker of requisite calibre to bring about the change. The result was obvious. It was a big failure—a big waste of money—time and energy. After a period of two years or so, the Villge AID Administration admitted its defeat and prematurally closed the development Area. It was really a sad thing; but there was no alternative. But none-the-less it proved one great fact that the personality of the worker plays the vital role in conducting such programme. This truth was further established when a year or two after this incident, the entire village AID Programme was abondoned; as it did not come up to the expectations. One of the main cause for such an unhappy end was that there were very few workers bing dedicated to the cause and working with missionary zeal. This failure has, however, left a great lesson. It is, in no way suggested that the Community Development Programme was not suited to the people of this country. Neither it would be said that we did not need such programme. On the contrary it is now proven fact that there is pressing need for Community Development Programme in every country of the world. And this will remain for all times, as no limit has ever been fixed for the upliftment of man. In fact as the man advances further and further, he is in need of such programme more and more. So I personally feel that our country needs it and it should be started again.

But before we start Community Development Programme here, it is imperative that we should revive our age-old conception of Community the most essential pre-requisite to start the programme. Fortunately the conception of Community is an

integral part of our social structure emerged from the religion (Islam) that we profess. The conception is so inter-wovn in our cultural patteran, that it controls the very life of the people who form the community. In our community again, the mosque plays the most prominent role. The mosque not only used to be a place of worship, but it also served as a community centre. It acted as nucleus guiding and moulding the activities of entire community or village. And each village- -rather each mohalla had and is still there a mosque. People came there for five times a day for prayers. But they also assembled there off and on to decide matters concerning community. It served as from for discussing Political, social and economic problems. It also served as a centre of education, where not only the children of the village used to get education, but there used to be literary debates and elightening lectures on topics concerning every day life of the people. Mosque was thus a hub of the social structure of the village. And this gave rise to the conception of community. With such strong and stable communities any programme could be easily implemented with success. So Islam flourished and spread.

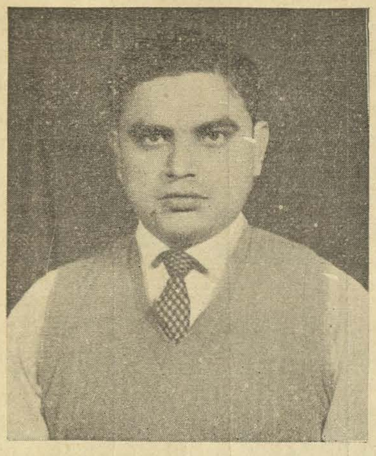
But today we find ourselves woefully much away from the mosque. Whole conception looks alien to us. Mosque is now a mere place of worship like a church or temple. So before starting Community Development Programme let us first revive the glory and grandeur of the mosque that may again act as nucleus of the community. Let us go back to the past and strengthen our communities again. Once we have cohesive and controlled community, any change could be brought in within no time. Once we have organized the people and infused confidence and courage in them, the nation would miraculously advance with big leaps forwards. And so in our country there are great chances for Community Development Programme to succeed.

Rural works programme aims at improving the economic conditions of the rural people. It is a branch of Community Development Programme. It is just part of the whole. The rural works programme essentially provides financial help to villagers to carry out small projects. It is not an educative programme like Community Development. The very objective of this programme as stated in the Manual of Instructions for the District works programme issued by the Government of West Pakistan, is "to raise the level of the productive employment by intensive use of local labour". The Works Programme is defined as "planning and implementing schemes of local significance, particularly in the rural areas by the local councils". It is an endeavour to involve local community and to induce them to contribute in and to carry out the development programme. It is merely an attempt to change the physical outlook of the villages by erecting school, buildings, dispensaries, by constructing link roads, tanks and small channels in the rural area. In short Rural Works Programme aims at providing some health, education and transport facilities to villagers. Thus its activities are mostly limited in the field of economics, making the programme limited in scope and utility. Hence Rural works programme in no way can ever replace Community Development Programme, that is still a crying need of the Nation.

With its restricted use, the Rural Works programme has however given a great relief to rural people. Small works are popping off here and there. It has afforded the most needed opportunity for employment to local labour. The programme has particularly proved a boon to the people of Thatta which is today in the grip of famine like conditions due to total failure of rains. The essential characteristic of the programme has been achieved here, as the works are being carried out through the intensive use of local labour. The impact of the programme is also being felt in other aspects of village life. It has generated enthusiasm amongst villagers who are now taking more interest in changing their villages. They have also started to shun off age old complacence and conservantism and are coming forward to take part in the development activities. It is indeed a great pleasure to state that the Rural Works Programme in this district is going on with great speed and spirit. Various projects are being completed much ahead of scheduled period. This has not only given job satisfaction but has also created confidence amongst the officials as well as in the people who now seem to be determined to change the present situation. This is not an empty statement. The facts and figures given in this brochure are sufficient to substantiate the statement.



Mujahids of Tarkhaja on the occasion of the Passing out Parade at Jati.



COOPERATIVES

ISMAIL UMAR,
Assistant Registrar,
Co-operative Societies, Thatta.

The Co-operative Movement in Thatta District commenced in the year 1916 with the registration of an Agricultural Co-operative Credit Society at Mirpur Bathoro The Movement made but very slow progress upto partition and even upto 1960, as would be seen from the following Co-operative figures:—

Particulars.	As on 30th June 1947	As on 30th June 1960
No. of Societies	12	20
Members	2,391	6,822
Share Capital	Rs. 69,000	Rs. 30,651
Working Capital	Rs. 1,92,000	Rs. 7,68,245

In the recent past, the Co-operative Movement in the District has recorded considerable progress as would be observed from the following statistical Table:—

Kind of Societ'es.	No. of Socs.		Membership.		Paid up Share Capital.		Working Capital.	
	1959-60	1962-63	1959-60	1962-63	1959-60	1962-63	1959-60	1962-63
Agricultral Societies.								
(*a*) Cc-op: Farming Union ..	..	1	..	10	..	3,000	..	27,118
(*b*) Mechanized Co-op: Farming Societies..	..	10	..	607	..	2,70,625	..	7,09,211
(*c*) Land Acquisition Societies ..	4	10	4,204	5,133	2,02,910	2,56,692	2,31,598	2,84,557

Kind of Societies.	No. of Socs.		Membership.		Paid up Sher Capital.		Working Capital.	
	1959-60	1962-63	1959-60	1962-63	1959-60	1962-63	1959-60	1962-63
Agrl. Credit Societies ..	10	18	1,968	2,892	56,307	1,25,633	4,29,592	4,27,749
(e) Fisherman Co-op. Societies. ..	..	1	..	94	..	6,850	..	7,6,850
(f) Union Council Service Societies ..	..	23	..	276	..	2,760	..	39,692
Non Agricultural Societies								
(a) Urban Credit Societies ..	2	4	394	627	39,559	56,448	92,809	95,323
(b) Coop: Consumer's Store ..	2	3	226	362	6,000	18,085	9,165	16,690
(c) Weavers Co-op. Societies. ..	1	1	17	20	..	..	3,346	3,522
(d) Housing Societies ..	1	2	10	20	1,735	2,735	1,735	2,735
Total ..	20	73	6,822	9,941	3,06,511	7,42,828	7,68,245	16,83,447

Progress Report of some important types of Co-operative is briefly given as under: —

1. Mechanized Co-operative Farming Societies:

Upto 30th June 1963 10 Mechanized Co-operative Farming Societies were formed and registered in Taluka Ghorabari and Thatta under Colonization Scheme, with membership of 607 and paid up share Capital of Rs. 2,70,625. The working Capital of these Societies has increased to Rs. 7,09,211.00 as on 30th June, 1963. The Government had reserved 20,000 Acres of perenial land in the above Taluka for Co-operative Mechanized Farming Societies which has been distributed among the said 10 Societies Of the total area reserved, Agricultural Development Machinery organization of Agricultural Development Co-operation levelled 13,757 acres of Land. Nearly 80% of levelled Land has so far been developed for cultivation and plougher by the societies 3,056 acres were shown during the last rabi, the first crop raised by the Societies. Of this, Major portion was under oil seeds and the rest under wheat. These Societies developed nearly 8,200 acres of land for Kharif cultivation.

The Societies have purchased 34 tractors (Fordson Super-Major) one tractor is generally employed for 500 acres.

2. Ghulam Muhammad Barrage Co-operation Farming Union-Var:

The 10 Co-operative Mechanized Farming Societies have formed a Union under the above name. The Union

under takes serving of Machinary used by members and for providing supply and Marketing facilities to the constituent Societies. It has engaged technical staff which remains touring for supervising maintenance of tractors and undertaking minor repairs. The Union has working Capital of Rs. 27,118.00 at present.

3. Agricultural Credit Societies:

The number of Agricultural Credit Societies in the District which was 10 as on 30th June, 1960 increased to 18 as on 30th June 1963. The membership of these Societies increased from 1,968 in 1959-60 to 2,892 as on 30th June, 1963. The following of these Societies stood at Rs. 4,27,749.00 The Societies are engaged towards financing of Agriculturists of the District.

4. Fisherman's Cooperative Societies:

During the year 1962-63 the Kalri Fisherman Society was Organized and registered for providing fishing Materials to fisherman community and arranging marketing facilities for the produce of Fisherman. The West Pakistan Cooperative Development Board has sanctioned one Ford Disel Truck costing Rs. 40,000.00 to facilitate Marketing of Fisherman's catches, besides the Board has also sanctioned Rs 30,000.00 for purchase of Nylone twine and other fishing Materials for the use of Fisherman.



Commissioner, Hyderabad Division along with Deputy Commissioner and other District Officers, arriving to perform the opening ceremony of Cooperative Store at Makli.

5. Union Council Service Societies.

Service Co-operatives have been organized and registered in 23 Union Councils of the District for providing Fertilizer and seeds to Agriculturists. These Societies have been providing

Fertilizer and seeds worth Rs. 60,943. Of these services Socities have disposed off quantitv worth Rs. 23,754.00 to the Agriculturists.

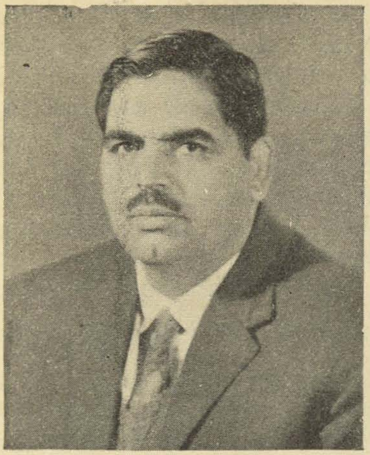
Besides, Agricultural Co-operation, there are also Non Agricultural Co-operatives such as Urban Credit Socities, Consumer's store etc.

6. Urban Credit Societies :

There were 2 Urban Credit Societies with 394 members and paid up Share Capital of Rs. 39,559.00 as on 30th June, 1960. The number of Urban Credit Societies increased to 4 as on 30th June, 1963. Their membership and Share Capital also increased to 527 and Rs. 56,448.00 respectively. These Socities have working Capital of Rs. 95,323.00 which is utilized by Societies towards advance to Shop-keepers and other merchants.

7. Cooperative Consumer Stores :

There are 2 Co-operative Stores as on 30th June 1960. They did not functioned well and were therefore closed down by the promotors. There was need for Consumer store at Makli. Mr. Shah Jahan S. Karim C.S.P., Deputy Commissioner, conceived the idea and persuaded others for formation of employees Consumer's Store at Makli, and finally the Store was got registered on 2nd May, 1963. The opening ceremony of the Store was performed by Mr. Abu Nasar, C.S.P., the Commissioner, Hyderabad Division on 21st July, 1963. The new employees store has membership of 120 and paid up share Capital of Rs. 7,770.00 the Store's average sales has increased to Rs. 200.00 per day.



COTTON CULTIVATION

CH. MUHAMMAD SHAFI,

Cotton Botanist, Thatta.

Introduction:

The district of Thatta which envisages a vast culturable area on both sides of river Indus in the lower Indus Valley is having almost comparable climatic conditions as that of prevailing in Egypt, the best quality cotton producing country of the World. It has, on account of this factor, been adjudged to be the only irrigated ideal tract in West Pakistan where extra long linted Egyptian like cotton varieties can be successfully cultivated.

Efforts were made as early as 1953-54 to introduce Egyptian cotton in Thatta and regular experiments were conducted in village four miles from it. Unfortunately, the floods which occured during that season and in subsequent years are reported to have spoiled the crop and disabled the workers to arrive at some definite conclusion. Now, the construction of Ghulam Muhammad Barrage has provided more secured irrigational facilities and also has given protection against the floods, the Government of Pakistan has reopened a Cotton Research Station at Thatta from May 1962 for exploring the possibilities of growing of quality cottons at this place.

The total cropped area of the district for year 1962-63 is estimated to be approximately 3.0 lacs of acres and at present rice is the major kharif crop and cotton so far, is cultivated only in a negligible area. The next crops in order are Bajra, Jowar and Toria etc.

Cotton Research Work at Thatta District:

Studies for cotton improvement work at the Cotton Research Station, Thatta have been concentrated at varietal, sowing dates and insecticidal trials which in brief, are summarized as below ad-seriatum.

(i) Egyptian Types Varietal Trial:

Seed of seven Egyptian cotton varieties namely Karnak, Maraad. Giza 26, Sea—Island, Boss III-16, 1—71 was arranged and sown in replicated plots at the Cotton Research

Station, Thatta in the second fortnight of March, 1963. Arher was planted on Southern side as protection against wind erosion. Six irrigations and 40 Lbs. of nitrogen *i.e.* two bags of ammonium sulphate or one bag of Urea per acre were applied with irrigation during the crop growth period. It was sprayed with toxaphene DDT to save it from the attack of jassid and boll worms. The pickings started in early July and continued till the end of November.

In cotton, besides yield staple. length, lint and oil percentage are important economic factors and an evaluation of varieties under trial for thes factors was got done from the Pakistan Research Institute, Karachi. The results in brief are, reproduced as below in Table No. I.

It may be seen from above that the Egyptian cotton varieties have shown commendable performance in yield and also have favourably compared with M4 approved American cotton veriety in lint percentage and are far superior to it in oil percentage. It may also be observed that the Egyptian cotton besides having good yield, possess very long staple length upto 1. 38 inches.

Sowing Date Trial:

The sowing time of cotton in West Pakistan ranges from mid of April to first week of July and like wise, the pickings starts from middle of September to end of November in different ecological zones of the country Thatta, being an ecologicals zone in itself needs an exploration in this respect and in order to find out the optimum sowing time of cotton, an

TABLE I.

Comparative yield, staple length, lint and oil percentage of Egyptian Varieties.

Serial No.	Name of Variety.	Yield in mnds. per acre.	Stap'e (Inches).	Lint %	Oil %	Remarks.
1.	M 4 (Mixture)	19.27	1.13	32.2	19.72	..
2.	Karnak	20.87	1.28	31.03	22.54	..
3.	Boss III-16	16.57	1.10	31.06	22.32	..
4.	Sea-Island	14.06	1.20	33.06	24.36	..
5.	Giza 26	13.39	1.38	29.30	22.04	..
6.	Palmyra	19.74	1.20	33.20	22.00	..
7.	Maraad	16.79	1.38	32.50	22.34	..
8.	1-71	13.76	1.27	32.03	20.10	

1. Lint percentage :—Lint ratio to Kapas in percentage.

2. Oil percentage :—Oil ratio to cotton seed in percentage.

experiment with five sowing dates at 15 days interval from 1st March to 15th May, 1963 was conducted at the cotton Research Station, Thatta. The observations recorded have revealed that March sowings are much better and the yield is reduced tremendously with further advance in sowings from 30th March to 15th May as much as 24.9 to 10.7 maunds per acre.

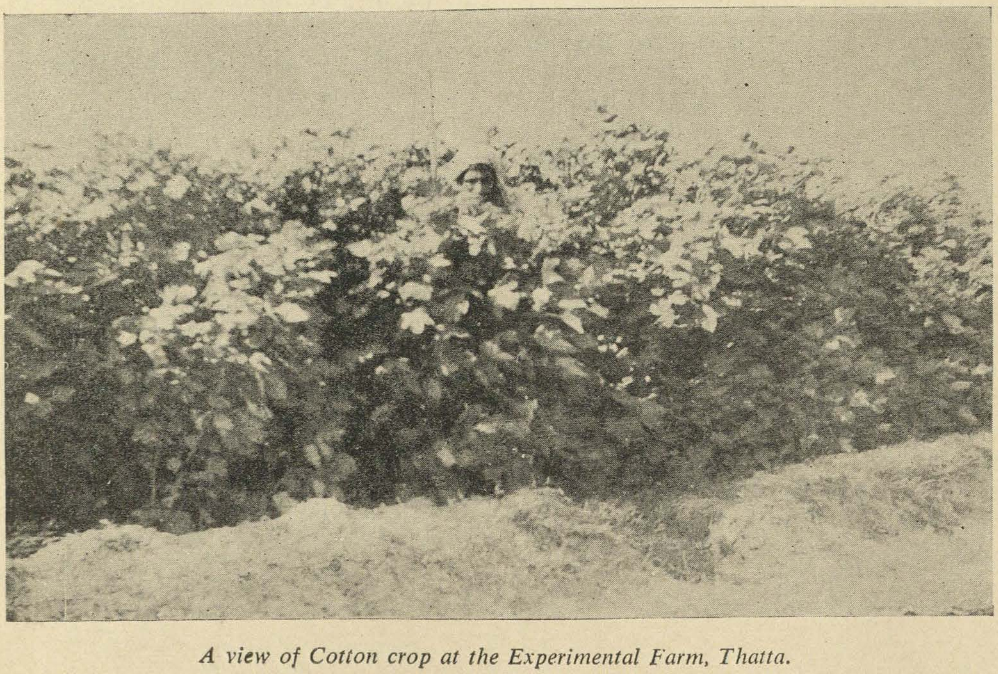
Insecticidal Trial:

The weather conditions at Thatta offers a good scope for breeding and multiplication of insect pests and every year a good deal of damage is harvoured by this menace in almost all the cultivated crops of this zone. This improtant aspect in cotton was included in the research programme. Toxaphene, a chlorinated Hydrocarbon insecticide was used as a chemical with 4 treatments (8 sprays, 6 sprays versus control). The serious pests at Thatta for cotton are jassid (Empoascadevastan) and pick boll worm (Pectionophora gossypiolla). The former sucks the juice of the leaves whereas the later as larva punctures the flower buds, flowers and bolls, causes shedding of them and later effect bad opening of bolls. Regular counts of Jassid and boll-worms were made by making 33 sweeps of net, inspecting 25 bolls, 25 flowers and 100 terminal buds at regular intervals. The average yield and insects population treatment wise is given in Table as II below.

TABLE II

Yield and Insect counts in Insecticidal varietal Trial, Thatta.

Serial No.	Treatment.	Yield in mds. per acre.	Jassid.	Boll worm.
1.	8 sprays	15.7	9	24
2.	6 sprays	14.25	82	35
3.	3 sprays	12.80	31	32
4.	Control	8.60	167	85



A view of Cotton crop at the Experimental Farm, Thatta.

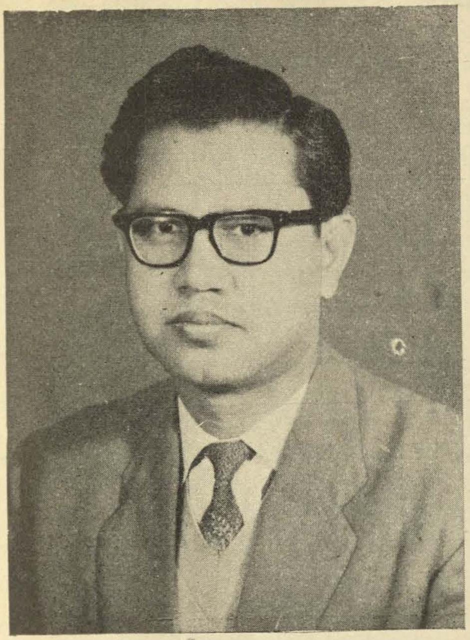
It may be seen from the comparative yield figures of control and sprayed plots that the cotton pests reduces cotton yield up to an extent of about 100% and thus cause a great damage to the cultivators. Its eradication is therefore, a national cause which every farmer should undertake gracefully with the help of extension wing of Agricultural Development whose voluntary services are always at free disposal of the cultivators.

Discussion:

The observations summarized in foregoing paragraphs relate to the year 1963-64. Though, the results discussed pertain to one year only but they have given clear indications that Egyptian Varieties, Par-Excellent in quality with a potentiality to give higher yields, can be successfully grown in Thatta conditions. There are cogent possibilities that Thatta district which hither-to has confined to rice cultivation as her main crop may in the near future divert to cultivation of extra fine quality cottons and thus earn prosperity for her and good name for Pakistan in the foreign cotton World market.

Acknowledgment:

My thanks are due to Messrs A. R. Pirzada and A. A. Ansari, Directors of Research, Tando Jam and Karachi for the technical guidance and support given during the course of above study. For the kind interest and great encouragement given to me as the newly established station I have to express my great indebtedness to Mr. Shahjehan S. Karim, C.S.P., Deputy Commissioner, Thatta.



Education in Thatta District

PROF. AFTAB AHMED KHAN,
PRINCIPAL
Government Intermediate College,
THATTA.

Introduction.

Thatta had been a great seat of learning and occupied a prominent position in the Indus Valley Civilization from time immemorial. Once upon a time, it was a great religious, educational and commercial metropolis. There were hundreds of madresahs imparting education at all levels. It produced famous scholars, artisans and craftsman. Thatta, though now a small District, was once the provincial headquarter of the Governors during Mughal period. Gradually, it fell to decline, so much so that a time came when it was unable to feed a single Secondary School. The birth of Pakistan proved to be an electric shock treatment for the sleeping populace of Thatta, who responded favourably and realized the growing need of education, which was considered a prerequisite for the development of a backward area.

Developments since Partition.

On account of the mass migration of literate Hindus to Bharat and a still great influx of illiterates or comparatively less educated Muslim from Bharat, education received a great set back especially in the former Province of Sind. There was an acute shortage of Teaching and Supervisory personal especially in the backward area of Thatta District which resulted in the closure of a large number of institutions, so much so that there remained only 126 Primary Schools in 1947. The task of rehabilitating the educational system was great. The crisis was faced boldly by the Government and the Department of Education made remarkable progress during the years since partition, having provided more and more educational facilities at all levels of education in the District which is evident from the following table:—

L (iv) 432—10

Year.	Primary		Secondary	
	No. of Institutions	Enrolment	No. of Institutions	Enrolment
August 1947 ..	126	7150	..	..
October 1958 ..	373	7925	4	125
June 1963 ..	502	23634	13	373

Source:—Office of the District Inspector of Schools, Thatta.

High Schools.—At present there are 6 High Schools as against only one which was functioning as a private school at Thatta town at the time of partition.

S.No.	Name of School	Year of Establish- ment	Enrolment at present	Remarks.
1	Government High School for Boys, Thatta.	1949	227	Taken over by the Govt. in 49.
2	Government Girls High School Thatta.	1960	34	Upgraded
3	Government High School Sakro.	1961	60	Upgraded
4	Chandio High School, Sujawal.	1952	172	Taken over by the Govt.
5	Government High School, Mirpur-bathoro	1961	94	Taken over by the Govt.
6	District Council High School, Jangshahi.	1963	78	..

College.—An Intermediate College for Arts and Science Classes was established at Thatta in 1960 to cater the need, of Higher Secondary Education of the District.

Literacy at Various levels of Education

According to the Census carried out in 1961 out of the total population of 3,61,733, 27435 males and 2,975 females were recorded as literates which gives the percentage of literacy as 10.2 for the age group 5 years and over. The position of the District in respect of literacy in Pakistan is 49th and in West Pakistan it is 32nd. An analysis of education at various level of the literate sections of the population is given in the table.

riod for which the entire administrative machinery from District to Regional level has been put into gear. With the valuable cooperation of the Deputy Commissioner, Director of Education, Hyderabad Region, Basic Democrates and the officers of the P.W.D. the progress at various levels of education has been quite satisfactory which is evident from the paragraphs to follow.

Primary Level.—The Education Department has placed an amount of Rs. 2,24,000/- at the disposal of the District Council, Thatta for the construction of Sixty six new primary schools in the District at an estimated cost of Rs. 3,350/- each. Thirty six schools have already been completed and the rest are under completion

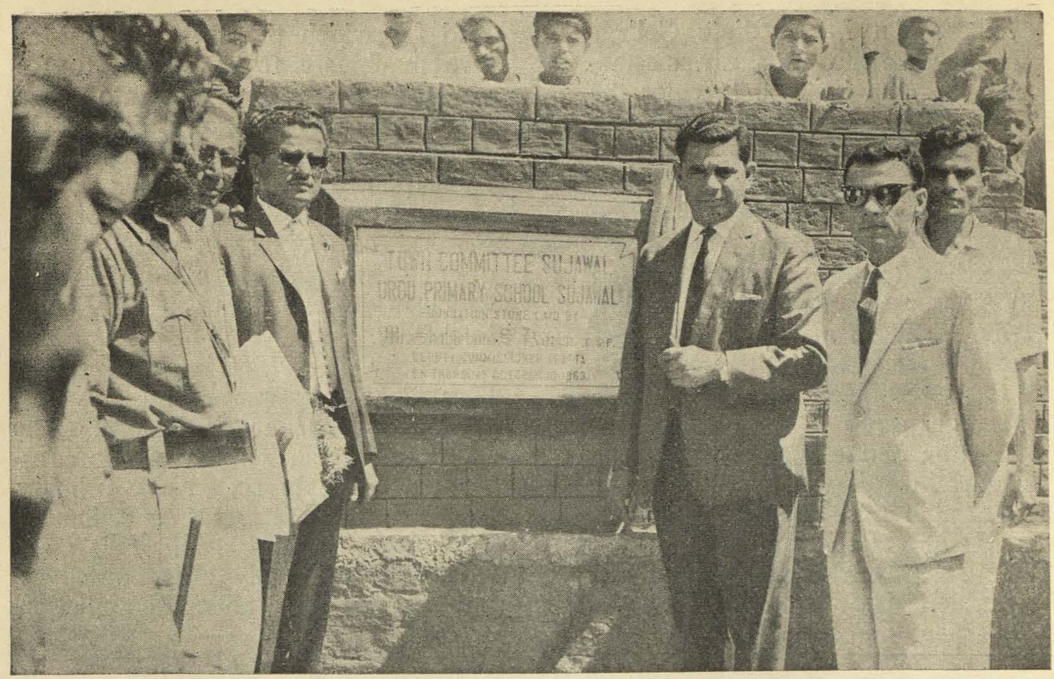
Educational Level.	Total	Male	Female
Post Graduate	82	81	1
Graduates	17	15	2
Under Graduates	148	136	12
Matric	858	822	36
Middle	1963	1849	114
Primary	9009	8398	611
Below Primary	16146	14292	1854

Source:—District Census Report, Thatta, 1961.

Achievement During the 2nd Five Year Plan Period:

The Department of Education has been working hard to achieve the targets envisaged in the 2nd Plan period for which the entire administrative machinery... As many as 90 Primary Schools for boys and 21 schools for girls have been opened in the District during the first two years of the 2nd Plan period.

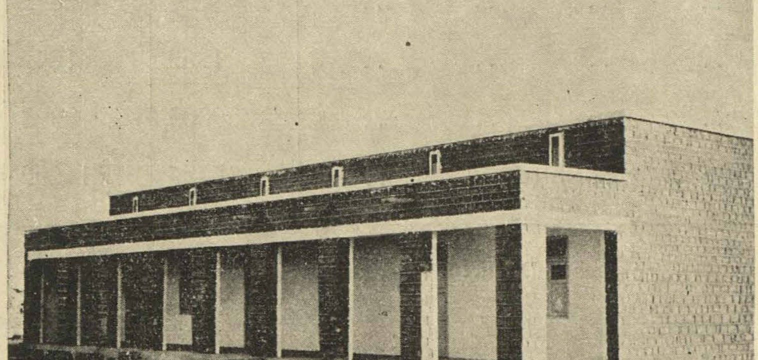
Middle Schools.—During the first three years of the present plan period



The Deputy Commissioner unveiling the foundation stone of Urdu Primary School, Sujawal.

about a dozen primary schools were upgraded to Middle standard. It is expected that more Primary Schools will be upgraded to Middle Standard, in years to come.

High Schools.—The Government Girls Middle School, Thatta was upgraded to the High School Standard in 1961. The existing District Council High Schools at Sujawal and Mir-

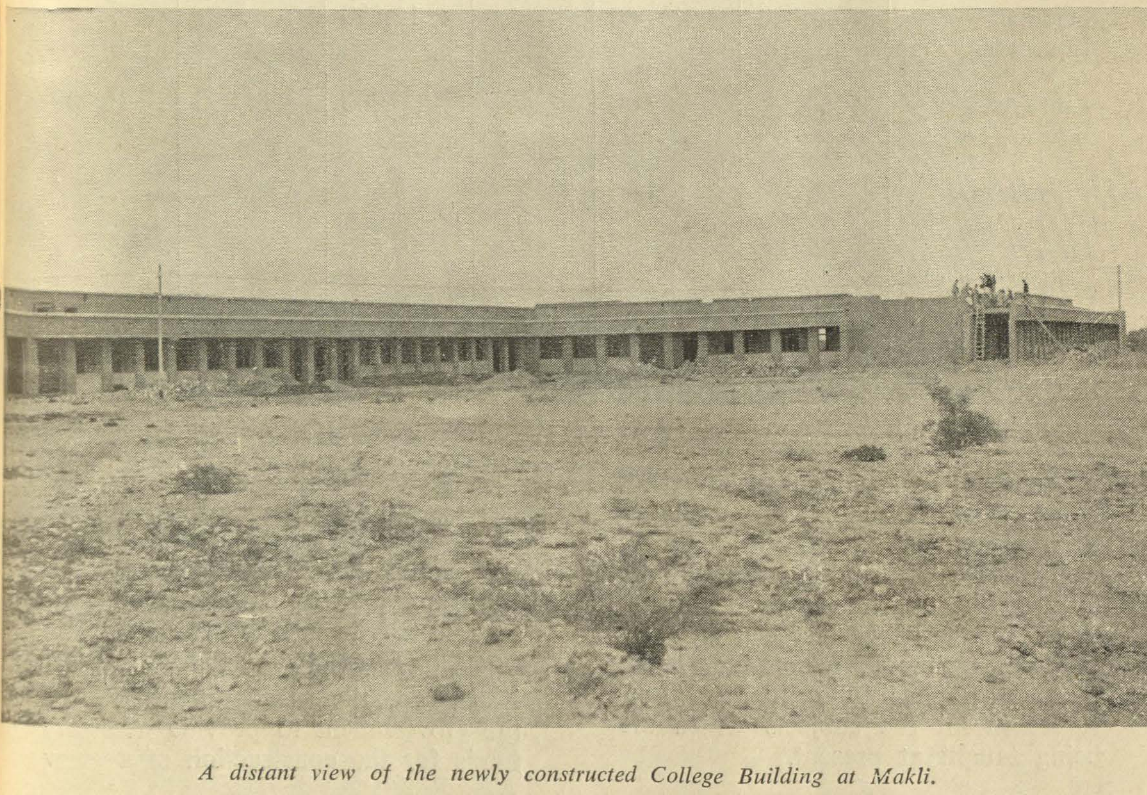


Newly constructed Building of Government Middle School, Makli

purbathoro have been taken over by the Government and are being shifted to new premises. The middle school, Sakro has been upgraded to a High School and a new building constructed at a cost of Rs. 70,000/- which has already been completed. A High School building and a building for Normal School for Primary Teachers are nearing completion. Two new High School buildings are being constructed at Sujawal and Mirpur Bathoro with an estimated cost of Rs. 3,30,000/- and 2,20,000/- respectively which are expected to be completed shortly.

Intermediate College.—With the sincere efforts and keen interest of the people and the authorities, the Government of West Pakistan was pleased to open an Intermediate College at Thatta in July, 1960. To benefit the populace of Thatta immediately, arrangements were made to get the main building of the local Government High School vacated and house the College in it temporarily. With the establishment of the College, the long felt need for an institution providing educational facilities upto Higher Secondary level was fully met with. Talented but poor students of Thatta, who were hitherto denied the facilities for higher education and for whom, education beyond matriculation was a real problem, got the golden opportunity at home to pursue College education, thereby opening new horizon for a wide range of careers.

To start with 47 students were admitted in the First Year and Intermediate Classes. However, with the provision of Science Classes in Pre-Engineering and Pre-Medical Groups,



A distant view of the newly constructed College Building at Makli.

the enrolment in various classes has been steadily increasing. During the current academic year over hundred students in all were admitted to various classes. The number is expected to increase considerably in years to come, with the construction of the hostel building at Makli which is expected to start very soon.

In addition to the recurring grants provided for the payment of the salaries of the teaching, ministeral and menial staff, the Government has spent a huge sum on the establishment and improvement of the college, excluding the construction of the College Building as detailed below:—

Sub-Head	1960-61		1961-62		1962-63	
	Recurring	Non-Recurring	Recurring	Non-recurring	Regular	Additional
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Science Equipment ..	3,000	40,000		12,500	..	..
Library Books ..	..	8,000		6,000	14,000	10,000
Furniture ..	..	10,000		5,000	..	..
Other contingences ..	1,500	..		10,110	..	..
Additional	1,000	..		..	..	..

The College is adequately staffed, having a team of young and enthusiastic workers, who have been doing very well thereby contributing substantially towards the upliftment of the institution. Inspite of the fact that very few candidates volunteer to come to Thatta, the College has fully qualified Lecturers in all the subjects which are being taught at present.

A sum of Rs. 14,680/- has been provided during the current financial year to be spent on the purchase of Science Equipment, Library Books, Furniture and to meet other miscellaneous contingent expenses.

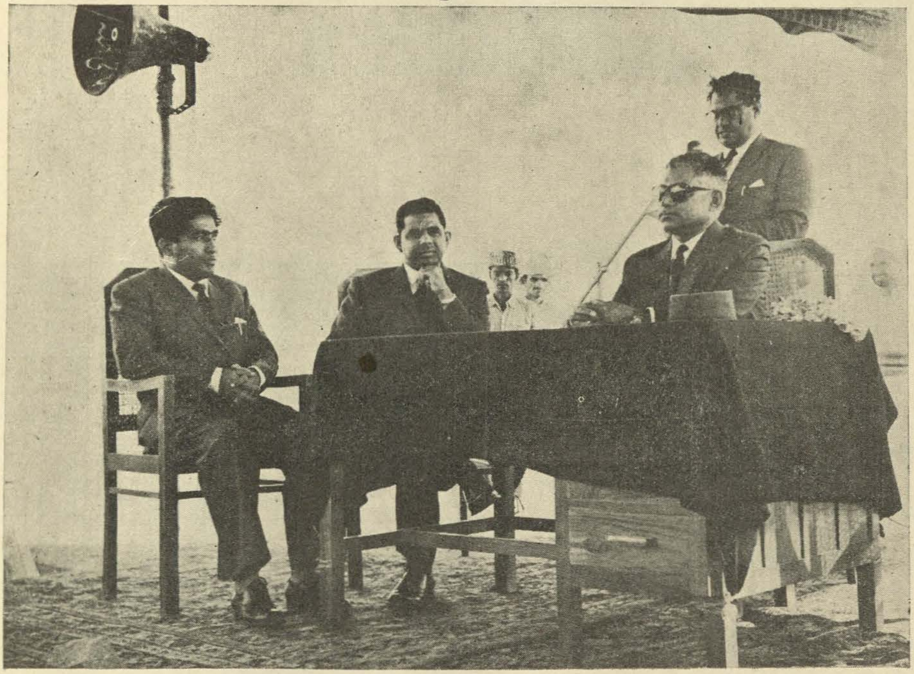
Soon after the establishment of the institution, the Department moved the Government to provide necessary funds for the construction of a new

building at Makli. The Governor of West Pakistan was pleased to grant administrative approval of Rs. 5 Lacs with a provision of Rs. 3 Lacs during the financial year 1962-63. The foundation stone laying ceremony of the college building was performed by Mr. Abu Nasar, S. Q. A., C.S.P., Commissioner, Hyderabad Division, on April, 20th, 1963.

Mr. B.K. Sheikh, Director of Education, Hyderabad Region presented the address of welcome, wherein the progress made by the Education Department in Thatta district and the plans for future developments were dealt with.

With the concerted efforts of the Education and Building Departments and the personal interest taken by the Deputy Commissioner, Mr. Shah Jehan S. Karim the construction work of the building was carried out so speedily that the work has almost been completed in a record time. The institution will be shifted to the new premises shortly. A sum of Rs. 3,26,196/- has been spent during the first phase of the construction work consisting mainly of academic block.

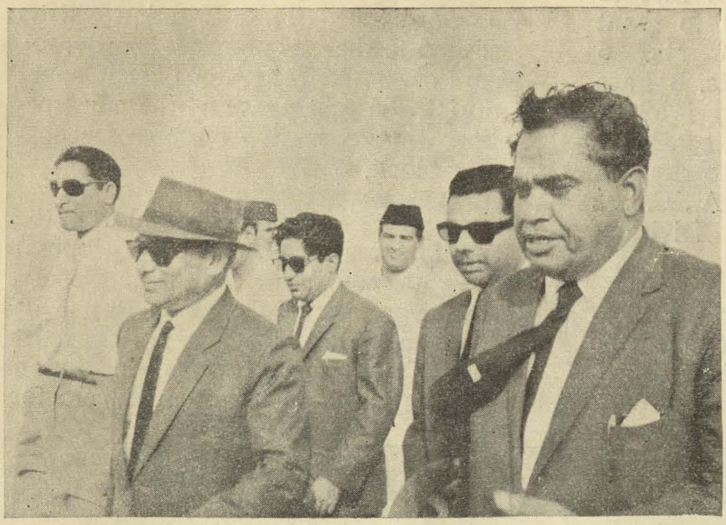
In view of pressing demand from the public for a Degree College, proposal have already been sent to the Department for upgrading the institution as early as practicable. It is expected that the upgrading of the institution will mark the dawn of a new era for Higher Education, bring about greater stability to the institution.



Mr. B. K. Sheikh, Director of Education, Hyderabad Region, presenting the Welcome Address to the Commissioner Hyderabad Division on the occasion of the foundation stone laying ceremony of Government College Building at Makli.

Third Five Year Plan:

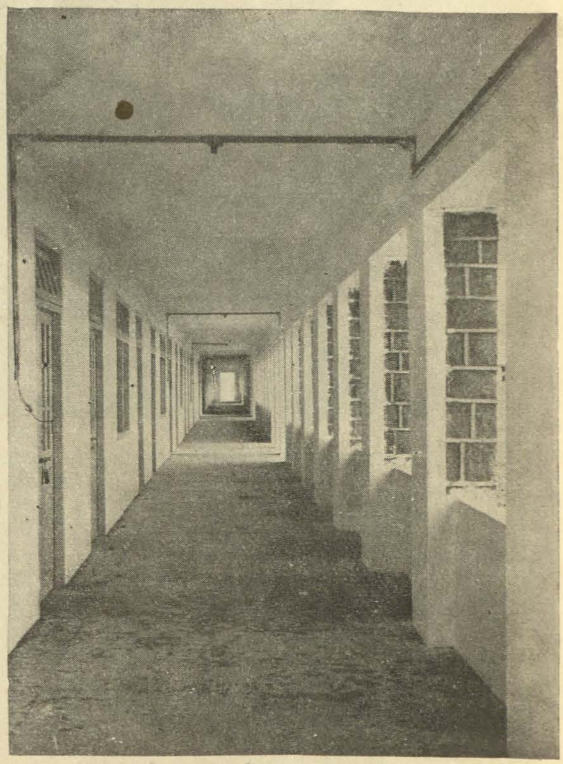
An ambitious programme has been chalked out for the development of educational facilities during the third five year plan period. Some of the



Commissioner Hyderabad Division accompanied by the Deputy Commissioner, Mr. B. K. Sheikh and other Officers going to lay the foundation Stone of the College Building.

major proposals included in the next plan period are as under: —

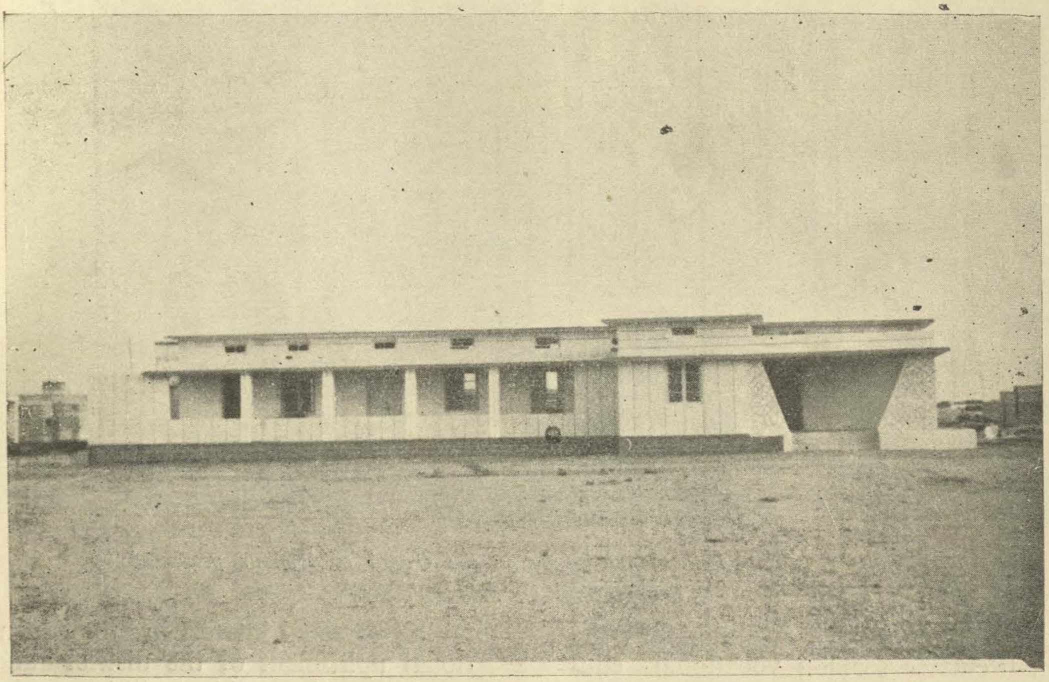
1. Raising of the Intermediate College, Thatta, to a Degree College both for Arts and Science Classes.
2. Opening of the Commerce Classes at Intermediate College Thatta.
3. Construction of Hostel building at Makli Hills for Government College, Thatta.
4. Opening of an Intermediate College at Sujawal.
5. Opening of High Schools at Chhuhar Jamali, Ghulamullah, Jati, Daro and Gharo.
6. Upgrading of at least 25 Primary Schools to Middle Schools.
7. Opening of Adult Education Centres in each Union Council.
8. Opening of Girls High School at Sujawal and Filter Plant, Gharo.



A corridor view of the College Building.

Miscellaneous.—An Elementary and Preparatory English School has been started at Makli in a new building which has recently been constructed at a cost of Rs. 35,000/-. About 60 students (boys and girls) have been admitted in this institution who are being Imparted Education in the montessori system well qualified and trained staff has been recruited for the School which is expected to make tremendous progress in years to come.

block for the Workshop attached to the Government High School for Boys has been constructed at a total cost of Rs. 50.000/-. A two day Technical Education Conference was held at Thatta, the final session of which was presided over by Mr. B. K. Sheikh, Director of Education. In his presidential address, the Director stressed the importance of Technical Education and advised the delegates to do their best to make the Technical Education

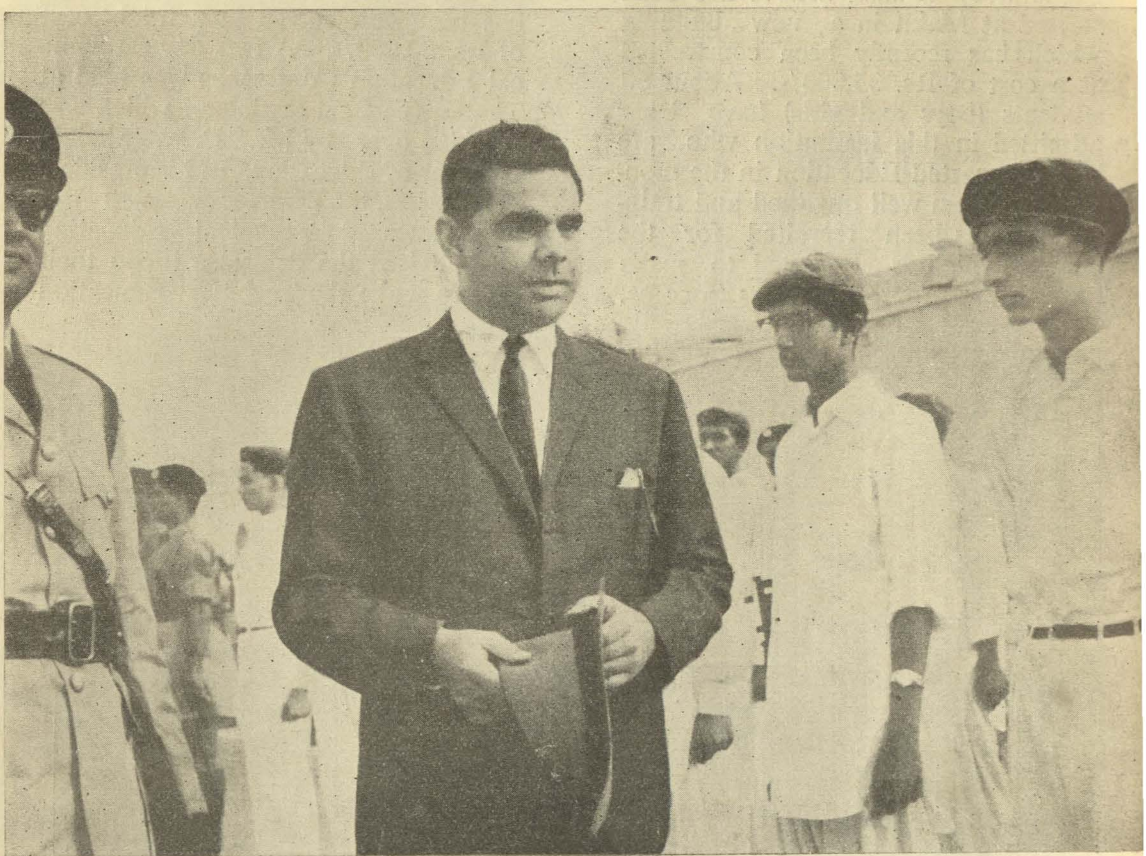


Elementary and Preparatory English School, Makli.

more and more popular. This has opened a new field for technical education of the students up to the matriculation level. The workshop is being equiped with the requisite tools and implements to promote technical education in wood work, metal work and elementary Electrical technology. Work shops are also being added to almost all the middle schools located in the District. There is ample scope for the establishment of a Technical School

A Darul Uloom cum Islamic Library is under construction at Makli which when completed is expected to be unique institution of its kind in the District. Generous donations in cash and in the form of valuable books are being received from philanthrophists, to promote research in Islamic studies and impart religious knowledge at higher level.

Keeping in view of the importance of the technical education a separate



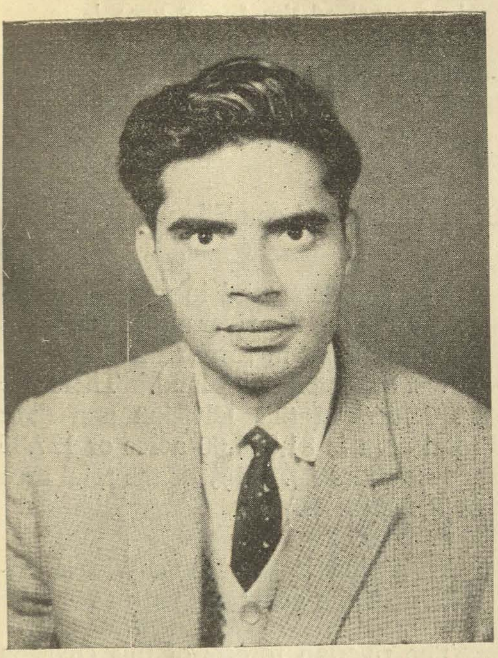
The Deputy Commissioner inspecting the Guard of Honour presented by School Boys on Pakistan Day.

or a Polytechnique Institute for the matriculates seeking vocational education.

In view of the fact that very few students from Thatta District qualify for admission to the Medical Colleges on account of a tough competition, the esablishment of a medical School at Thatta will go a long way in providing educational facilities in the field of medicine.

The recent developments in the field of Education owe a great deal to Mr. B.K. Sheikh, Director of Education. Hyderabad Region, who ever since assuming charge of the region has been taking personal interest in the educational upliftment of the district and providing all possible facilities to the existing institutions.

A review of the development activities especially in the field of education shows that results achieved so far have been very promising. The education Department proposes to take up more intensified programme of development in the District during the remaining years of the current plan period and third five year plan period and it is expected that with the active co-operation of the authorities, citizens and the philanthrophists, the District will be spaced of the stigma of so called backwardness.



THATTA FORESTS

M. ISHAQUE SHEIKH,

Divisional Forest Officer, Thatta.

Location:

Forests of Thatta Division lie between 67°—39° to 68°—32′ parallel East Longtitude and 24°—15′ to 25°—19′ parallel North latitude. Through the area of this Division the river Indus flows from North to South and bulk of forests lie along or close to its banks. Forests do not form a continuous strip on either banks but lie in patches of various sizes. On the left bank a few forests *i.e.* Khokhar and Budhka fall in Hyderabad Civil District while the rest all, on right bank as well as on left bank fall in Thatta Civil District.

Configration of the ground:

The forests lie in the alluvial plain of river Indus. The ground is intersected at numerous places by abandoned beds of the river appearing in shapes of depressions and at few places continuous stretch of sand. The Indus alluvium, on right bank is bounded by flat topped lime stone hills, running close to forests in Jherruck Range.

Rock and Soil:

The soil is composed of the alluvial deposits brought by the Indus. It is very fertile containing varying proportion of clay and sand and is well suited for growth of Babul (Acacia Arabica) and Kandi (Prosopis specigera). Want of irrigation has converted some soil into kallar (Saline Soil) which deos not allow to grow any thing except Khabar (Salvadora persica) and Lai (Tamarix Disicia).

So far in this Division, the area under kallar is comparatively smaller but due to lack of irrigation by flood water for the last so many years it is apprehended that the conversion rates of kallar may accelerate.

Climate:

The atmosphere is moist in the Southern part and dry in Northern. During April to October this tract receives sea breeze and the atmosphere gets damp in Southern part. In November there is a change in the direction of the sea breezes till March. The temperature varies from nearly freezing point in December and January to about 115°F in May June. Nights in winter are cold and frosty severe frost is however rare, but when occurs forest growth is damaged enromously. Dew is very heavy in the months following the fall in river and persists upto April. Rain fall varies greatly from year to year and is on the whole scanty. The bul of the rainfall is received in the months of July, and August. It is of little consequences to the forests, except in case of high lying areas which are beyond the reach of river floods and in which regeneration can be obtained by rain water.

Winds:

South-West monsoon winds prevail in a considerable part of the Division from June to September, the period when most of the forest area is under water. Babul, a shallow rooted species when open to the action of wind, is liable to fall as the sandy soil can not support it firmly.

Composition and condition of Forests.

The forests spread in a linear direction all along the river about 100 miles on either bank in form of long narrow strips or patches of land. There are 34 forests in this Division and their total area is 81,826.00 acres or 127.85 square miles *i.e.* 1.8% of the total area of the District.

Following is the Range-Wise distribution of the area:—

Range.	Area Reserved.	Area protected.	Total Area.
Thatta	15,142.9	7,215.8	22,358.4
Sujawal	11,925.8	5,464.00	17,389.8
Jherruck	16,830.9	8,042.0	24,872.9
Bano	16,924.9	280.0	17,204.9
Total ..	60,284.2	21,001.8	81,826.0

The riverian forests of this Division are confined between protected bunds on either bank. Out of all forests of Thatta Forest Division part of Shah Lunko forest, Gharko, Khanani, Malirary and Khaso on the right bank and part of Pako Surajani Ganj and Hazari forests on the left bank have been transferred to the Ghulam-Muhammad Barrage Scheme 1962.

Development Schemes:

At present following two schemes have been under taken in this Division.

1. Rehabilitation of Riverian Forests.

2. Road side plantation.

Rehabilitation of Riverian Forests.

The importance of afforestation of Riverian forests has been greatly felt by the Government for control of recurring floods in the country as well as to restock the forests with more valuable trees. The economic pressure being in their varied aspects make it imperative that riverian area should be clothed with forests as soon as possible. Therefore an area of 1300.0 acres has been under taken for the purpose in 3 years i.e. 1963-64, 64-65, 65-66. In the first year of the scheme *i.e.* 1963-64, an area of only 200 acres has been taken in hand according to the availability of funds allotted and the rest of the target will be achieved in the following years as and when funds are made available.

Road Side Plantation.

It was decided in the Forest Officers meeting held at Sukkur under the Chairmanship of the then Chief Conservator of Forests West Pakistan Lahore that on road side plantation should be carried out in Thatta Forest Division during the 1st four years of the period due to the fact that the portion of the National High Way falling within the jurisdiction of this division was badly damaged during the previous rains. However in the year 1962 on experimental basis an strip of 5 miles length was under taken which failed due to calinty and water-logging.

Again a stretch of 2 miles at Makli has been taken in hand and plants are raised in pits irrigated by handwatering. Ninety percent success has been achieved in this field at this stage. Since the stratum underneath a few inches of fresh and foreign soil in rocky it is thus apprehanded that the growth of these plants may remain stunted for lack of opportunity to the roof to penetrate through the rocky stone. The National High Way passing through Thatta Civil District is either water-logged as a result of heavy water dozes to the paddy crop extending on both sides or the soil is rocky hence difficult to be planted unless heavy funds are available. However the planting work is being carried out as far as funds are available.

Developments:

Government of West Pakistan in consultation with Board of Revenue have agreed to transfer states owned riverian lands to the Forest Department. An area of 314,934.0 acres of waste land has been claimed by this division for transfer to the Forest Department. Correspondence regarding transfer of the area is in progress with the Revenue authorities. Further the Government has issued directive to the Deputy Commissioner, Thatta, to organize the District Afforestation Committee consisting of the representatives of Revenue, Agriculture and Forest Department to survey and select riverian areas which are unfit for cultivation so that the same may be handed over to the Forest Department for afforestation. The Deputy Commissioner, Thatta, has nominated members and meetings are being held under the Chairmanship of the Deputy Commissioner, Thatta, and there is a high hope of fruitful results.

Developments by A.D.C:

In view of shortage of fire-wood and timber in the country the raising of irrigated plantation is urgent necessity in pursuance of the policy of the Government that 10% of the land and water in all canal colony areas be reserved for afforestation. Ganj Hazari, Surjani on the left bank and Shah Lunko, Gharko, Khanani, Malirari and Khaso on the right bank of Thatta Forest Division have been taken by the A.D.C. for irrigated plantation Irrigation water is being made available gradually and areas are taken for afforestation and with the assured water supply now available after the construction of Ghulam Muhammad Barrage. It will be possible to raise good timber forest in the area.

GLIMPSES OF THATTA

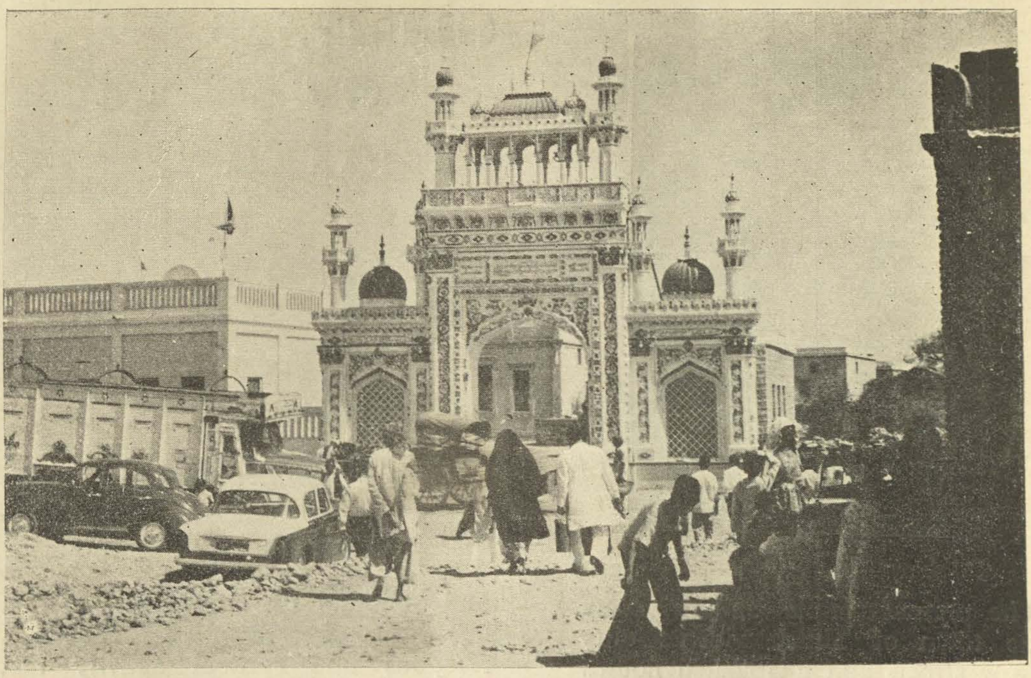


HABIBULLAH G. QUADRI,

Member, District Council, Thatta.

The present picture of the dusty little town of Thtta, with its dirty narrow streets and dilapidated houses inhabitated by a few thousand wretched people, eking out a miserable existence in squalid indigence, is a far cry from the image of the fabulous metropolitan city that Thatta once was. It would look ridiculous now to draw any comparison between the present-day Thatta and the great metropolitan city of London. However an Englishmen who has visited Thatta in the 17th Century, had described it to be more beautiful and spacious than the London of that time. About the same period, the author of "Zakhirstul Khawanin" in his account of Thatta had described it as a 'paradise on earth'.

Apart from being a fabulously wealthy and beautiful city, Thatta of old had been a great seat of learning where people from far off places came to take instruction in esoteric and exoteric sciences. According to Captain Hamilton, who had visited Thatta in 1699 A.D., there were as many as 400 colleges in Thatta where youth were instructed in theology, philosophy and politics. The atmosphere of that age was so charged with literal, artistic, religious and spritual activity that there was almost a mass-production of scholars, artists, writers, poets, theologians and spritualists in Thatta. The six miles long famous necropolis of Makli hills, where Thatta buried its dead, is claimed to contain the graves of more than a lakh saints and numerous scholars and poets of great merit. Hundreds of valuable literary works in Arabic and Persian prose and poetry, some manuscripts of which now adorn many famous libraries in the world, were produced in Thatta by renowned authors like Ali Sher Qani, Mir Hyderuddin Abu Turab "Kamil", Muhammad Mohsin and his son Ghulam Ali 'Madah', Mir Abdur Rashid (author of two highly valued dictionaries, 'Farhang-i-Rashidi' and 'Muntakhabul-Lughat'), Akhund Faiz-Ullah 'Tapash', Allama Muhammad Muin (Makhdum Tharo) 'Taslim', Makhdum Muhammad Hashim, Muhammad Taher Nisvani, Muhammad Panah 'Reja', Muhammad Ibrahim Khalil and scores of others. Many classic treatises written by these authors on various subjects were



The famous Shrine of Abdullah Shah Sahabi near Makli Monuments.

included in the curricula of academic instruction in Egypt, Iraq and Arabia Some of these books are still being printed in Egypt in the names of their original authors. It can safely be assumed that Thatta of old had played a vital role in the creation of Pakistan. It was a gateway through which Islam spared into India and the seeds were sown for the growth of Muslim society that become the basis of the State of Pakistan.

Population of old Tatta:

There are conflicting estimates about the population of Thatta in the days of its glory. Burton's estimate was 2,80,000 souls (*Vide* 'Sinde or the Unhappy Valley' Vol. I), but one historical account claims that during the days of the Mughal Emperor, Aurang-Zeb, the population of Thatta and its suburbs was around the three million mark. As late as 1740 A.D., when Nadirshah had visited Thatta, it had 40,000 weavers, 20,000 artisans and 60,00 dealers in various trades. Forty-three years earlier, *i.e.* in 1696, about 80,000 people had died of plague (Hughes: 'A Gazetteer of the Province of Sind). Reading these accounts one may well assume that epidemics and geological changes had partly contributed to the decadence of Thatta.

Debal same as Thatta:

According to various accounts, the historical seaport of Debal, which was captured by Muhammad bin Qassim in 711 A.D., was the same place which was later named Thatta. Allama Bilazari also has mentioned Debal and Thatta as one and the same place. All Persian history books of old identity Debal with Thatta. One of the oldest maps of Sind drawn by Batlimos shows the location of Debal where Thatta is now situated. Ibn Huqal had also shown Debal similarly situated. The author of Tuhfatul-

Kiram also speaks of Thatta as being built on the land that was once submerged under sea water. It is conceivable that in the olden times, sea was close to where Thatta is now situated but moved away from it on account of some sudden geological changes in the structure of that area like that brought about in Shahbunder region by a terrible earthquake in 1819 which gradually converted the great port of Shahbunder (King's port) into the present-day village of no consequence.

Foundation of Modern Thatta :

Most accounts agree that the modern town of Thatta had been built in the fifteenth century by Jam Nizamuddin, the illustrious ruler of Samma dynasty on the banks of an old branch of Indus which was subsequently silted up Raverty, however, reports in 'Mehran of Sind's that the foundation of Thatta was laid by Jam Tamachi about the third quarter of the fourteenth century, while Haig ('The Indus Delta Country') puts the date about the year 1340 A.D.

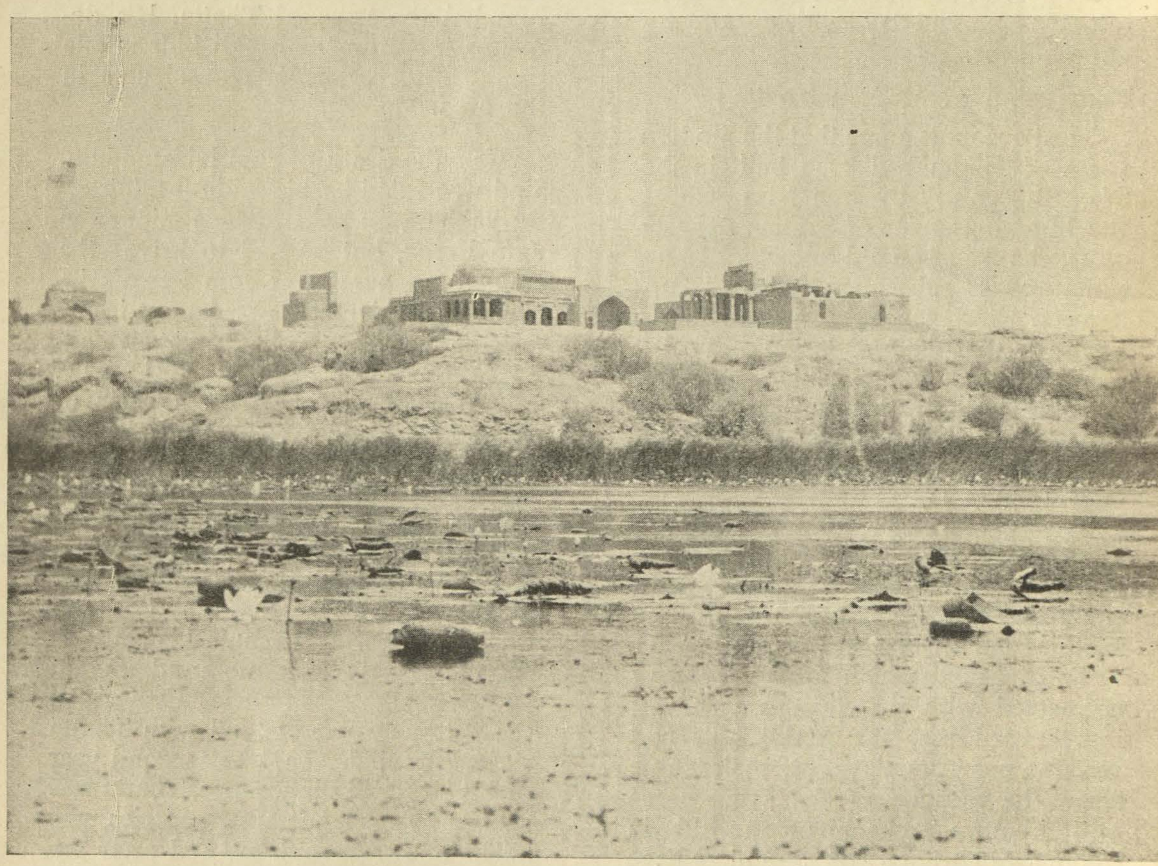
Makli Monuments:

No account of Thatta can be complete without the account of the historic monuments in the great necropolis of Makli which are so closely connected with its glorious past. It is recorded that the Makli hills and the famous cemetery got, their name from the mosque of the same name built by Jam Tamachi on the hills in the neighbourhood of Samui village (also called Samanagar) at the bidding of a great saint of Samui, Hamad Jamali. The name Makli is reminiscent of the holy city Mecca. The Makli necropolis extending over six square miles, contains millions of ancient graves besides the ruins of numerous tombs and shrinines of histrical importance. The history of old Sind is synonimous with the history of Thatta which was capital in the fifteenth and sixteenth centuries A. D. Sind remained under Arab domination for about three centuries and then it came under the sway of sumra rulers followed by Sammas who came in power in 1333 A.D. The most illustrious ruler of Samma dynasty was Jam Nizamuddin who ruled Sind with absolute authority for 48 years until his death in 1508 A. D. He is credited with having founded the town of Thatta. His domeless tomb on the Makli hills is one of the most beautiful mausoleums in the area.

After the death of Jam Nizamuddin, Sind was ruled by his faithful minister, Daryakhan, on behalf of his minor son Jam Feroz, but he had to leave the country on acount of Jam Feroz's intrigues. A civil strife broke out in the Samma family which ultimately ended in their downfail. In 1521 A.D., Mirza Shah Beg Arghun, a ruler of Qandhar conquerred Sind and allowed his army to plunder Thatta for ten days. He died in 1522 and was succeeded by his son Mirza Hasan Arghun in whose days Hamayun, the Mughal Emperor, had visited Sind. Mirza Hasan died in 1554 A. D. and Sind was divided between his generals Mirza Essa Tarkhan and Sultan Muhammad. Mirza Essa ruled the Lower part of Sind with Thatta as its capital. In the second year of his riegn, in his absence, Thatta was sacked by portuguese merceneries who killed numerous citizens and after setting fire to the city, decamped with "one of the richest booties ever taken in Asia." Mirza Essa died in 1572 A. D. His remains lie buried on Makli hills in an enclosure, containing other graves, to the east of Syyed Abdullah Shah's Sharine. Two years later, Sultan Mahmood of Bakhar died and his territory was incorporated in the Mughal Empire by the order of Akbar.

Mirza Essa was succeeded by his cruel and unprincipled son, Mirza Mohammad Baqi, who committed suicide in 1585. He lies burried on Makli hills close to the famous mausoleum of Nawab Essa Khan.

. Mirza Baqi was succeeded by his grandson, Mirza Jani Beg who was compelled to acknowledge the suvereignty of the Mughal Emperor but, in position of governors appointed by the Imperial Court at Delhi. Jani Beg died in 1599 in Delhi after spending the last 7 years of his life in Akbar's Court. His body was brought to Thatta to and burried in the Makli necropolis. The Photo of Makli monuments printed on the ten-rupee note of Pakistan currency had been taken from the top of his mausoleum.



A panoramic view of Makli Monuments.

secracy, he was trying to regain his sovereign authority. Akbar came to know of his intentions and sent an army under the command of Nawab Abdur-Rahim Khan-i-Khanan to subjugate him. He was compelled to sue for peace in the year 1592 A.D., which marks the end of the sovereignty of Tarkhans who were now reduced to the

After Jani Beg's death, his son Mirza Ghazi Beg was oppointed Governor of Thatta by Akbar. He was assassinated in 1610 A.D. and was burried on Makli hills in the enclosure containing his father's grave.

After Ghazi Beg's death, Emperor Jehangir sent his Governors to Sind

directly from Delhi. Among them was Nawab Shurafa Khan who was appointed Governor of Thatta in 1624 but was soon relieved by Mirza Essa. On his death in 1642, Shurafa Khan was burried on Makli hills inside the tomb built by him in his life time.

The most famous and best preserved among the Makli mausoleums, is the tomb of Nawab Mirza Essa Khan grandson of Mirza Essa Tarkhan, founder of Tarkhan dynasty. The Construction of Mirza Essa's tomb was started during his life time, when he was Governor of Thatta, and was completed after his death in 1644. It may be mentioned here that, two years back, the Archaeological authorities had drawn up a plan for the renovation of Mirza Essa's mausoleum and made a good start towards that end. But the work appear to have been delayed for want of funds.

Shah Jehani Mosque of Thatta :

Among the historical monuments situated in the town of Thatta, mention may be made of the Shahjehani Mosque, which is one of the finest constructions of archaeological interest. It was built in 1649 by Mir Abdul Baqa Amir Khan, by order of the Mughal Emperor. Shah Jehan, as a memorial for his regard for the people of Thatta who had given him asylum during the time of his flight from his father, Jehangir. It is a large edifice, 315 feet long and 190 feet wide, with a spacious Courtyard surrounded by a domed roof supported on massive walls and pillars of brick masonry. The building has a total of 92 domes including the three most prominent ones. The interior of the mosque is decorated with encaustic painting of unsurpassed beauty. There are also some elegant specimens of tracery work and perforated stonework in different parts of the mosque. The Government of West Pakistan has prepared an elaborate scheme for the renovation of this historic edifice. The renovation work has been going on since 1960 but the pace of progress has not been in keeping with the planned schedule. Non-availability of funds is reported to be the caues of delay.

Art of Chronography :

The art of chronography had also attained a high degree of excellence in Thatta in the days of its glory. The dates of memorable events were recorded in the form of Persian or Arabic verse containing words which, when deciphered with the help of 'Abjad' numercial values, would reveal the dates of occurrence of the events.

In Thatta, Mir Ali Sher 'Qani' had the reputation of being a past-master in the art of composing chronograms as would appear from the following persian lines composed by him to commemorate the birth of a son to Najmuddin Quadri of Thatta in the year 1168 A.H.

جلیل احدی	فقیه وافی	فصیح اجسم	بعلم مسلک
یمین عقبی	جلیل و زاهر	کریم اطیب	بعقل کمل
مدار اولی	بحار اعطا	مدقق امجد	ولیٔ ماهر
محقق اجلی	مرام اهدا	سراجی ابهی	موفق الله

In the above arrangement, each line of the verse is divided in four parts, each part containing two words. The beauty of the chronogram lies in the fact that words contained in each compartment are not only of the same rhythmic length but also of the same numerical value according to Abjad calculation. The numerical value of the words in each compartment is 292 and any four compartments will total up to 1168, indicating the year of birth of the child. Besides, whether read horizontally, vertically or diagonally, the words in the compartments will form a line which will not only flawlessly rhym with its corresponding line but will have the numerical value of 1168.

Numerous chronograms engraved in stone on the tombs of saints and princes and other historical monuments at Makli and Thatta have faded out under the action of the elements. Many are still discernable. Some of these are reproduced hereunder: —

The years of construction of various phases of the Shah Jahani Mosque in Thatta are recorded in the following lines: —

ندیدم چشم فلک مسجد بدین خوبی
که آمدند ملائک برائی دیدن فیض ۔

بجستم از خرد و عقل سال تعمیرش
بدید کرد اشارت که هست معدن فیض ۔

(1054)

چوز صاحب قران شاه جهان
یافت ترتیب مسجد اعلی ۔

هاتفم گفت سال اتمامش
گشت زیبا چو مسجد اقصی ۔

(1057)

پادشاه زمانه شاه جهان   جامع تته دلکشا پرداخت ۔
مرتفع جامعی که گنبذ او   سایه بر قبهٔ سما انداخت ۔
خاصه بهر خدا ظل خداٴ   خانهٔ رحمت خدا پرداخت ۔
رضوی انتساب میر جلال   که وزارت از وصفا پرداخت ۔
بست فرشی که سنگ آن زصفا   رشک جام جهان نما پرداخت ۔
سال تعمیر آن دبیر خرد   فرش مطبوع دلکشا پرداخت ۔

(1068)

Another ancient mosque in Thatta known as Amirkhani Masjid has the following ehornogram inscribed on its door:

این مسجد بهشت نشان را بنا نهاد
مهر سپہر دولت و اقبال امیر خان

چون ختم بود در همه اوصاف فیض و لطف
سال تمام گشتن او نیز ختم دان
(1040)

Another chronogram inscribed on one of the walls in the same mosque reads as under:

همی کردم طلب سال بنایش   خرد گفته که بیت الله بانی
(1039)

In the central part of the main bazar in Thatta is another acient mosque known as Masjid Khizr Hayat. It was built in 1022 A. H. by Mir Abdur Razzaq Ma'moori who was revenue collector in Thatta in the days of the Mughal Emperor, Jehangir. On the Mehrab of his mosque are inscribed the following words:

خاک آستان نبوی حضرت صلی الله علیه وسلم عبدالرزاق الحسینی المعموری
الملقب بمظفر خان بتاریخ ۱۰۲۲ھ اتمام شد۔

The ancient Idgah at Makli, where the people of Thatta and its suburbs go for offering. Id prayers, was built by Nawab Yousif Khan, Governor of Thatta, in 1043 A.H. The following inscription on its Mehrab gives the year of its construction:

خان مالک رقاب یوسف خان   ساخت طاعت گہی ز بخت بلند
قدسیان بهر سال اتمامش   کعبه اهل فضل یافته اند
(1043)

The following lines are engraved in stone on the grave of Nawab Shurafa Khan, burried on Makli hills, who was temporarily appointed Governor of Thatta by the Mughal Emperor, Jehangir. He died in 1052 A.H. and is burried in an enclosure containing, in all, three graves:

انکس که وزارت یافت صد زیب از راء او
چون قصد سفر کرد زین خانهٔ پر محنت
از غیب بگوشی آمد آن که خوش الحانی
تاریخ وفات او جاء شرف جنت
(1052)

Engraved on a stone above the door of Nawab Shurafa Khan's tomb are the following lines, which give the date of construction of the tomb:

بهر تاریخ بنائ روضه دیوان سند

گفته شد جاوید یا رب مقبره پر نور باد

(1089)

The year of death of Mirza Essa Tarkhan, founder of Tarkhan Dynasty, is incorporated in the following lines engraved on a stone in his tomb:

بسال نهصد و هفتاد و نه سن هجری جهان گذاشته بگرفت ملک جاویدان۔

(979)

The following lines are engraved on the tomb of Nawab Mirza Essa Khan, grand-son of Mirza Essa Tarkhan and Governor of Thatta in the days of Jehangir. He died in the year 1054 A.H. The last two lines of the verse are not properly discernable:

چو رحلت کرد از دار فنا آن سرور ترخان

به بستان جنان آسوده شد آن سرور اعلیٰ

به پرسیدم چو سال رحلت او گفت از سر واه

شده آسوده میرزا بکام از میر ما واه

Another grave in the same enclosure has this inscription engraved on its tombstone:

چون فتح مرزا ازین دار فنا در ملک بقا گرفت آرام

رضوان تاریخ رحلتش گفت فتحی بر ارم نمود آرام

(1093)

The following lines engraved on the tombstone of Mir Amiruddin Khan, Governor of Thatta in the days of Aurangzeb Alamgir indicate that he had died in 118 A.H:

خان با مکین امین الدین امیر

عالی از حسن عمل درجات او

چو سفر کرد از جهان بی ثبات

سال فوتش داخل الجنات او

(1188)

The tomb of Jam Nizamuddin, illustrious ruler of Samma dynasty, was built on Makli hills in the year 915 A.H. by his son Jam Feroze. The date of completion of the tomb is written on the tomb in Arabic in the following words:

قد بنی هذه القبة الرفیعة و المرقد المنیعة

السلطان الاعظم والخاقان الاعدل الاقدم ناصر الحق

و الدنیا و الدین ابو الفتح فیروز شاه علی

ابیه المرقد العلیته السلطان نظام الدین بن السلطان

صدر الدین شاه بن السلطان صلاح الدین شاه

بن السلطان رکن الدین المدفون فیها فی تاریخ

سنة خمس عشر و تسعمائته ۔

(915)

Social Customs:

Social Customs, as part of culture, evolve from human relations. They reflect the feeling and emotions of a human society and contain clues to the history of its development in the past.

Some social customs pervailing in Thatta point to a highly developed social order in the remote past. The Exeavations at Moan-jo-Daro contain evidence of the existence of such a society in Sind. Indeed, those must have been highly civilized and technically well informed pepole who had recognized the possibility of controlling the growth of human organs and developed a technique to mould the different parts of human face into the shapes conforming to the conventional standards of facial beauty.

Moulding of Features.

In Thatta proper as probably in other areas of Thatta district, it is daily routine with the mothers of newly born babies to carry them, first thing in the morning, through a series of physical exercises designed to mould the cranium, nose, forehead, lips, chin, cheeks and neck in such a way as to create the effect of a handsome face.

The child's body is vigorously massaged, its nose experty rubbed and pulled between the thumbs and its forehead, chin, cheeks and lips pressed with fingures and palm. After these exercises, the baby is tightly wrapped in a piece of cloth and allowed to lie down on its back with the head firmly held in a pit-like contrivance designed to elongate its neck and flatten the back part of the head. This routine for a male child is carried out for five months, but only three months for a female child. However the female head receives much more attention than the male one. The mother of a female child who neglects 'breaking' her head pro-

perly, is socially censured. The results achieved by these techniques within the spare of a few months would not take less than million years in the natural course of organic evolution.

Privilges of the Male:

It is lucky to be born a male in Thatta in that physioligical condition, one would have some epecial privileges that are denied to the members of the opposite sex. The members of the female fraternity in the house will take turns bringing up a baby boy like a real prince, trying to establish the superiority of his sex among his sisters in various ways.

Aware of the power of suggestion, the mother will not associate her son's name with disease and death. In order to convey to her friends the serious nature of his illness, she will substitue her own name for him while speaking of his illness. This technique is not employed in case of a girl whose death is not considered calmitous like. That of a boy.

Boys in Thatta might delight their parents by talking of their maturity and marriage, but unmarried girls would send their grandmothers into hysterics if they ever dared to discuss their own marriages.

Functions of mother-in-law

A girl's marriage in Thatta is an occasion of no rejoicing. The family falls into a mood of mourning over the prospect of sending their daughter to live with her mother-in-law. The bridegroom's mother in Thatta is a woman of great authority and many functions. As an active member of the so called Committee acting as Custodians of the Code of Conventions, it is her function to see that every rule of the unwritten Code is strictly observed. It is among her functions to see that the married couple does not indulge in open demonstrations of love. If the newly wedded couple is caught smiting or amorously looking at each other in the presence of others, the mother-in-law will knit her eyebrows into a frown to express her displeasure.

The Elusive Bride.

An engaged man in Thatta will have no idea of what his fiancee looks like until he gets her first glimpse on the morning following the night of their wedding. The Nikah ceremony is performed in her absence by a close relative authorized by her in presence of two other male relatives. No one has ever seen a photograbh of the bride for the simple reason that young woman in Thatta are never photographed. The bridegroom is kept wondering about his fiancee's features by her people who would not permit even the maid servants of his house to see her before the wedding.

Beauty Appliances.

Differences of opinion might occur between the old and young ladies on the issue of utility of the old customs but all woman in Thatta are agreed upon the point that eyes stuffed with antimony powder, head soaked with rapeseed oil and lips stained with potassium permanganate add to their beauty and charm. But rapeseed oil has many other uses known to the ladies. It is a handy first-aid remedy and is lavishly applied to the scalp of a child when he gets a fall or exhausts his brain by too much talking. Somehow the ladies of Thatta have discovered that a portion of human brain burns out by excessive talking and can be repaired by the application of rapeseed oil.

The Nose-Ring.

Clothes and jewellery are the Ladies greatest passion in Thatta. Nose-ring, weighing in the neighbourhood of 3 ounces, is the most important item of jewellery. It has both ornamental and sentimental value. A married woman will wear it as long as her husband is alive. And for that matter it comes within the functions of the mother-in-law to see to it that her daughter-in-law does not neglect wearing the nose-ring as a positive sign that her husband is yet alive. But wearing weighty ring on the nose is a trying experience and the young ladies are revolting against it much to the annoyance of the old custodians of the outmoded Customs.

Unmarried girls and widows never wear the nose-ring. If an unmarried girl is made to adopt nose-ring as piece of her jewellery, it will be preceded by a dedication ceremony which has the significance of a solemn announcement that the girl will remain celebrate throughout her life.

Rules of Modesty.

Rules of modesty require a newly maried girl tokeep her head and eyes down in the presence of male members of the household for the first year of her married life. Going to attend a marriage ceremony in another house, she is required to cover the distance between the entrance of the house and her seat by literally walking at snail's pace, keeping her eyes and head down and rigidly firm. In that important performance, she will be asisted by half a dozen volunteers from the household whose function it will be to keep the way clear before her and to tell her if her pace is too long or her head is not low enough. A three-inch pace is to long; it should be within one and two inches and taken after a time interval of a quarter minute.

Remarkable Memory.
Clothes.

Every home in Thatta is a factory where ladies' garments are constantly in the process of being embroidered with gold threads for use on occasions of social functions. Such clothese are whose discarded as second-hand stock after they have been used on a few occasions.

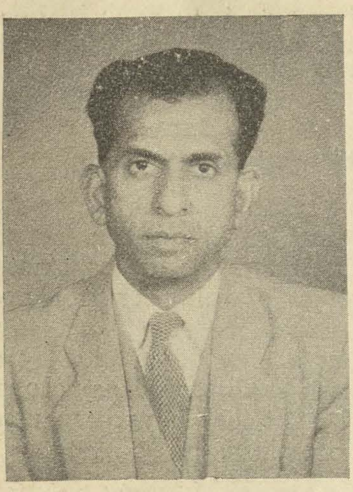
Bigamy.

Few men in Thatta have two wives. Whose number is less than one in a thousand. Their wives spend most of their time vying with each other, creating comforts for them. The only care the husband of two wives is required to take is to devise and follow a system of equal distribution of love and work between his wives. If, for instance, he accidentally tears one sleeve of his shirt and wants to have it mended at home, he should deliberately tear up the other sleeve in order to have an equal distribution of repair work between his wives, for if he asks one of them to mend his torn shirt, having nothing to offer for repair to the other the latter will have a valid cause to feel that her husband has stopped loving her.

When a man marries a second wife the party aggrieved is the first wife the second wife being looked upon, as encroacher upon the latter's matrinomila rights. These rights do not cases with death.

———

L (v) 432--13



PUBLIC HEALTH

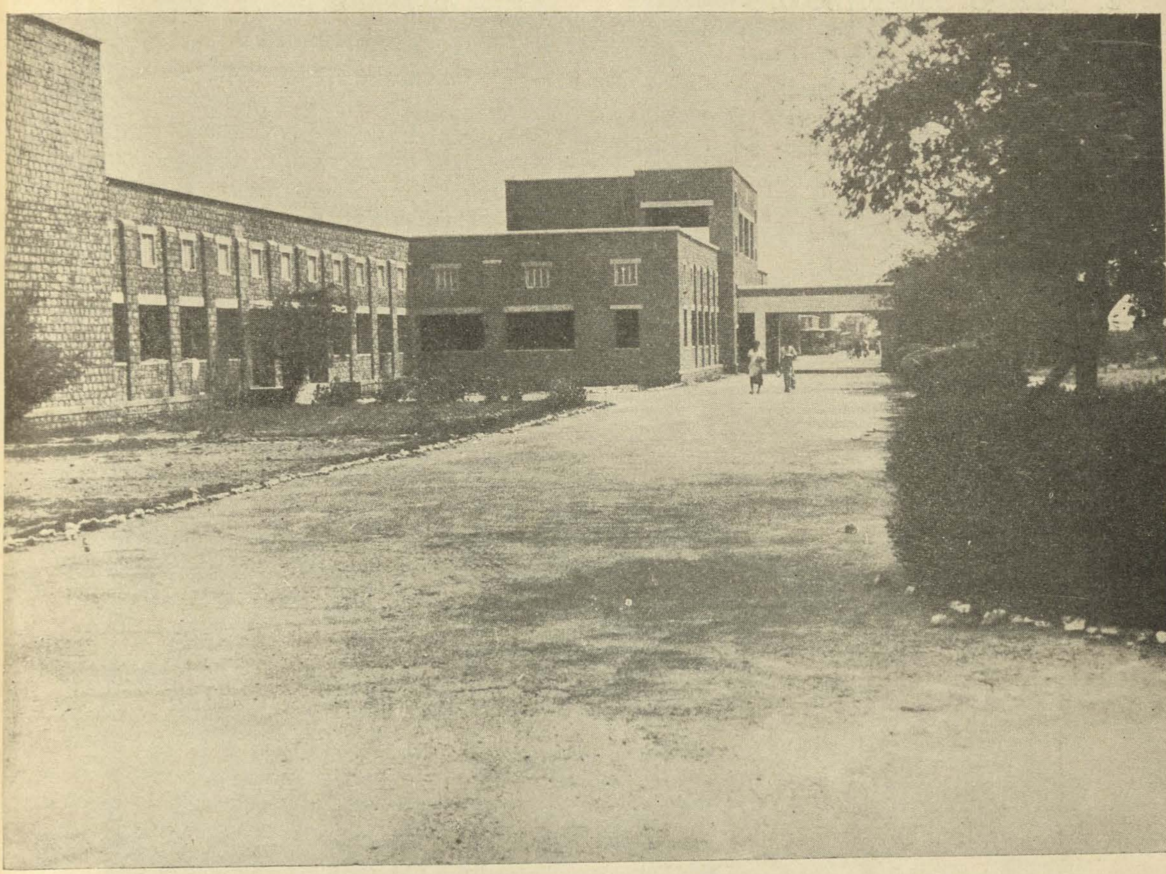
DR. M. USMAN,
Medical Superintendent and District Health Officer, Thatta.

Considerable progress has been made during last five years both in curative and preventive fields. It will be recalled that before 1958, there was only one small ten bedded hospital at Sujawal and eleven Dispensaries including two mobile units in the district. The hospital and dispensaries were under the control of the Civil Surgeon whose office was located at Karachi. The Civil Surgeon was supposed to look after the Public Health problems of the district. In the year 1958 under the Re-organisation Scheme of West Pakistan Health Services the post of District Health Officer was created and that of the Civil Surgeon was re-designated as Medical Superintendent. All affairs relating to Public Health as well as supervision of the various dispensaries in the district became the responsibility of the District Health Officer while Medical Superintendent was given the charge of the District Headquarter Hospital which came into existence in December 1958. Initially the hospital provided indoor accommodation for seventy five patients which was later increased to 100. It is hoped to increase the bed strength to 125 as soon as necessary funds are available. A Dental Clinic has recently been started at the Hospital.

Since 1958 twenty one more dispensaries have been established in various parts of the district, which brings the total number to thirty. These dispensaries are situated at Jherruck Mipurbathoro, Jati, Mirpursakro, Ladiun, Chuhar Jamali, Keti Bunder, Jhimpir, Vur, Banno, Gharo, Jungshahi, Ghulamullah, Darro, Ghorabari, Baghan Sonda, Kharochan, Dhandhari, Gul Muhammad Baran, Jian Zangejo, Chilya, Darya Khan Suho, Sajanwari, Bello, Janghri, Jhandhro and Tando Hafiz Shah. The mobile dispensaries are run by the Government and the rest are controlled by the District Council, Thatta. Government aid is also given to nine of the District Council dispensaries.

The bed strength of the hospital at Sujawal has been raised to fifty. The new hospital building is under construction and is expected to be completed this year. The outdoor patients block of the hospital has already been

completed and it has been decided to shift the out patient department to the new premises as soon as arrangements for water supply and electricity have been completed.



Civil Hospital, Thatta.

Rural Health Centres.

Under the Rural Health Scheme a Rural Health Centre is under construction at Mirpur Sakro, with three Sub-Centres at Gharo, Buhara and Sulleman Bazi. Eight more Centres with three attched sub-centres are to be established at the following places:—

PRIMARY RURAL HEALTH CENTRE.	*SUB-CENTRES.*
1. MIRPUR SAKRO.	i. Buhara. ii. Gharo. iii. Sulleman Bazi.

PRIMARY RURAL HEALTH CENTRE.	*SUB-CENTRES.*
2. MIRPUR BATHORO.	i. Darro ii. Jhok Sharif. iii. Banno.
3. JHERRUCK.	i. Hilaya. ii. Sonda. iii. Oangar.
4. CHUHAR JAMALI.	i. Ladiun. ii. Jango Jalbani. iii. Jiand Zangi Jo
5. JATI.	i. Raj Mallick. ii. Tar Khowaja. iii. Gul Muhammed Baran
6. VUR.	i. Kotri Allah Rakhio Shah. ii. Pir Patho. iii. Ghulamullah.
7. BAGHAN.	i. Keti Bunder. ii. Sajan Wari iii. Kharochan.
8. JUNGSHAHI.	i. Jhimpir. ii. Gul Mando. iii. Chato Chand.
9. BELO.	i. Saeed Pur. ii. Budho Talpur. iii. Kot almoo.

Maternity Homes.

At present there is only one Maternity Home which is functioning at Sujawal. It has been decided to start five more maternity homes at Chuhar Jamali, Mirpur Bathoro, Jungshahi, Pir-jo-goth and Gharo. Necessary funds have already been provided by the District Council.

T. B. Clinics.

At present a ten bedded ward is available at Civile Hospital Thatta for treating serious cases. A scheme for starting a T.B. Clinic at Makli is under consideration and the details are expected to be finalised shortly.

Eye Camp.

As facilities for the treatment of eye diseases do not exist at District Headquarter hospital, a temporary Eye Camp was established for a period of one month in December 1962. Necessary funds for the camp were provided by the District Red Cross Branch, Thatta, and the technical staff, medicines and medical equipment by the Blind Relief Association, Karachi. About 1600 patients attended the outdoor and 800 various eye operations were performed. A similar camp was again established in December 1963. About 1000 outdoor patients were treated and 500 various eye operations performed.



Haji Hasan Ali P. Ebrahim President held Blind Relief Association with Dr. M.H. Rizvi and other volunteers at the Eye camp.

Public Health.

As has been mentioned earlier, the District Health Officer is responsible for Public Health of the district. He advises the Chairman of Town Committees and various Union Councils of the district on all matters of hygiene and public health. The technical staff consists of one District Inspector of Vaccination, one District Sanitary Inspector three Tehsil Sanitary Inspectors, two Sanitary Supervisors, twelve Sanitary Patrols, and nine Vaccinators. A post of Assistant District Health Officer was created last year. No appointment has however been made against the post.

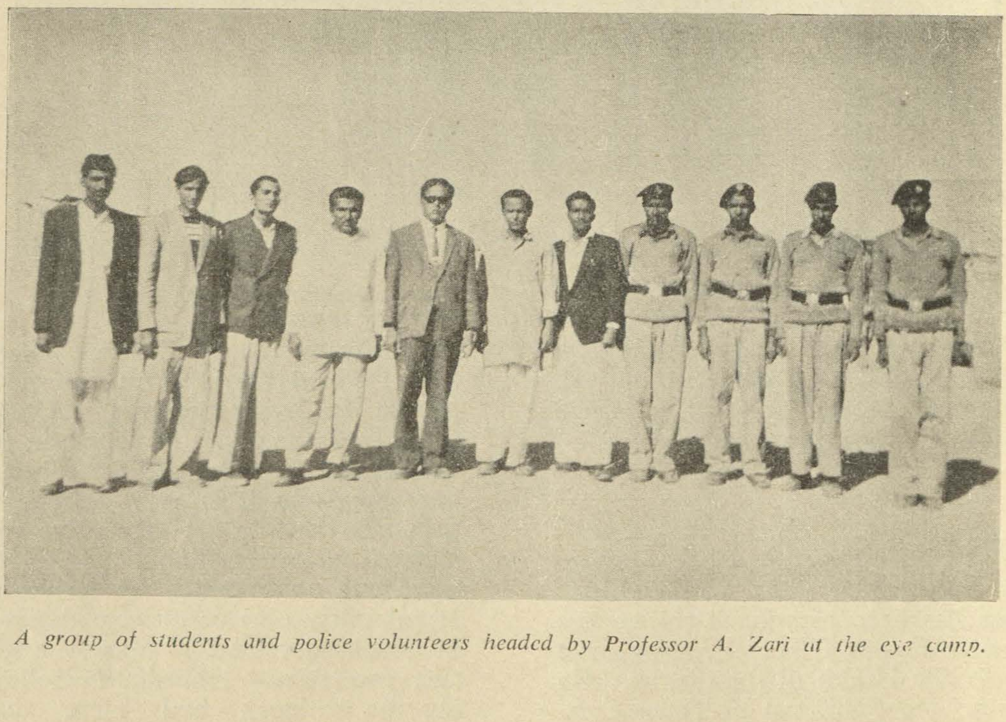
The most important problem of Public Health is the prevention of infectious diseases *e.g.* Small pox, Cholera, and Typhiod fever. Of these smallpox is the major problem. Unfortunately the majority of people in the district are illiterate and not health conscious and it is very difficult to persuade them to get themselves vaccinated against smallpox. In 1962 there was an outbreak of smallpox. In all thirty nine cases were detected of which four died. Mass vaccination was started immediately following the outbreak and more than

40,000 persons were vaccinated. The following table gives the number of people vaccinated in the district during last five years:—

Year	Numbe rof persons Vaccinated		Total
	Male	Female	
1959	8,819	6,198	15,017
1960	6,982	3,696	10,678
1961	8,101	4,017	12,118
1962	25,622	15,036	40,658
1963	11,100	6,949	18,049

Family Planning.

Family planning has now become a socio-economic problem. The population of Pakistan has been increasing at a tremendous rate and poses a serious problem for the Government. In order to check this menace the Family Planning Scheme has been launched by the Government. Under this scheme Family planning Centres have been established in the various hospitals and dispensaries of the country.

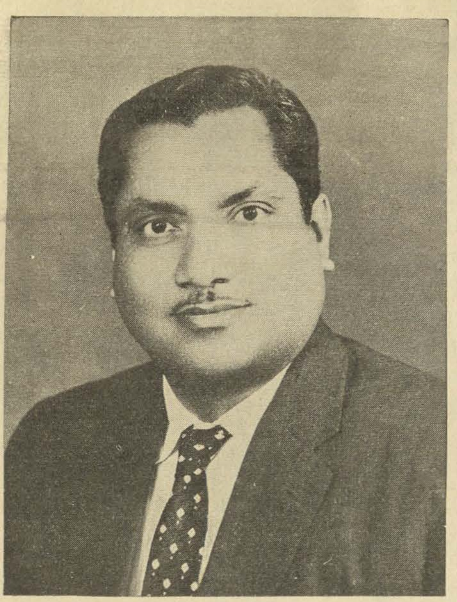


A group of students and police volunteers headed by Professor A. Zari at the eye camp.

The District Headquarter Hospital Thatta and all other dispensaries have been provided with Family Planning Equipment and nine Medical Officers have undergone training in Family Planning. More Doctors would be taking training this year

Health Education.

Due to mass illiteracy the problem of Health Education has assumed great importance. Lectures on personal hygiene, sanitation, prevention of Infectious diseases and Family Planning are given by the Sanitary Inspectors in villages. Health stalls are established at the various fairs where charts and models regarding sanitation, infectious diseases and family planning are exhibited and lectures on these subject are delivered to the Public. The programme of health education is going to be intensified and it is hoped it will go a long way in awakening health consciousness amongst the people of the district.



IRRIGATION

ABDUL-REHMAN SHAH

Executive Engineer

Thatta Irrigation Division.

Brief History of Irrigation in Lower Sind:

Irrigation in this area was being done by the Inundation Canals. These canals used to flow when the river was in floods. The water supply was never dependable and it varied with the vagaries of the river. First perference was being given to the water supply to Karachi which unusually adversely effected the cultivation in this tract.

Kalri Baghar Feeder Upper:

With varying levels and discharges in the river the only way to give an assured water supply to a canal is to construct a barrage. With this in view, Ghulam Muhammad Barrage has been constructed near Jamshoro. Kalri Baghar Feeder takes off from right bank of Ghulam Muhammad Barrage and out falls into Kalri lake. The length of of Feeder is 38 Miles.

Head regulator of Kalri Baghar Feeder at Jamshoro:

The area through which it passes is all lift and very fertile. Several pumps have been sanctioned on Kalri Baghar Feeder Upper to increase cultivation. The lands between Nai-Baran and Jherruck are very fertile but are lying barren since last three years as the river remained low and they could not get spill water. Asluice Regulator has been constructed on the right side of the Feeder at RD 107 which shall supply perennial water to 7000 Acres of land. On the left side, as area lying between Nai-Barran and Jherruck, it is propos ed to construct a regulator at RD 118 to feed two channels namely Hafiz Shah Distributary and Jherruck Distributary which have been completed This will give perennial supply to 25,000 Acres in Tapu Hafiz Shah and Tapu Jherruck. Kalri Baghar Feeder has been constructed in two portions: (1) Kalri Baghar Feeder Upper (2) Kalri Baghar Feeder Lower. The planning and execution of this Feeder is a great Engineering feat requiring a series of large and intricate works in the length of about 58 Miles. In this reach the Feeder passes through a high rock cutting.

Cutting in rocky Soil

The Feeder crosses Nai-Baran where a huge Supper-Passage has been constructed at a cost of Rs. 1,00,00,000/-.

Supper Passage of Kalri Baghar Feeder Upper:

KALRI LAKE

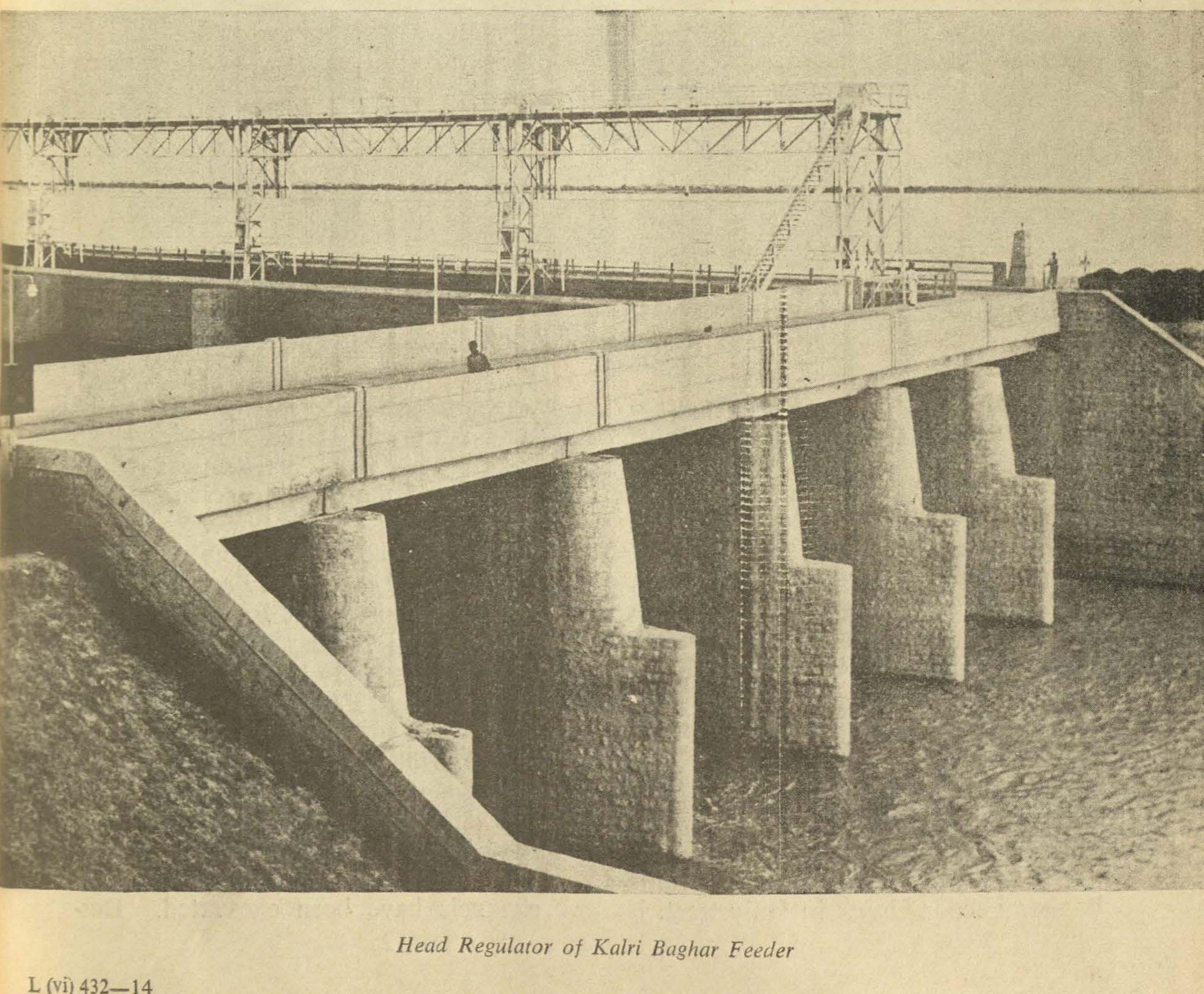
Kalri Baghar Feeder Upper out falls in Kalri lake which is a huge water reservoir about 50 sq. miles in area. It is 20 miles long with an average width of 2.5 miles . The average depth of water in lake is 20 ft. It's storage capacity is about 1,75,000 ft. which, in a flat country is no mean assets to our Irrigation needs. This serves as a valuable reserve during peirods of low supplies and assures perennial supplies for Irrigation purposes and drinking water to Karachi.

After from the stronge adventage it is iocation ads to the beauty of his area.

Scenic beauty of Kalri Lake:

The Agricultural Development Corporation has an ambitious programme of developing this place into a tourist resort. The development includes afforesation oll round the lake area developing swimming beaches, constructing swimming pools, tourist huts and hotels. The 1st stage includes to develop the area from Neelum point to Hillya point.

Kalri lake has abundant fish wealth which is further being developed after



Head Regulator of Kalri Baghar Feeder



Kalri Baghar Feeder.

proper research and necessary investigations. There is very good culturable land on the right side of the lake near Jhimper and the scheme for developing it is in hand. The demand of cultivators of Thatta District for Silty water is receiving active consideration of Agricultural Development Authorities and the alignment of the proposed link channel connecting Kalri Baghar Feeder Upper and Kalri Baghar Feeder Lower is being examined thoroughly.

Kalri Baghar Feeder Lower:

Due to difficult construction of Kalri Baghar Feeder Upper in Hilly tract, it was not possible to supply water to the right bank of Thatta District upto 1958. This gigantic task was completed and the opening ceremony of Kalri Baghar Feeder Lower was performed on the 20th December 1958. It was a red letter day and a revolution in the history of Irrigation of this tract. Kalri Baghar Feeder Lower takes off from the leading channel of Kalri Lake at P.Q. Fall.

P.O. Fall itself is a wonderful construction designed for 6855 cus. with safe cut off of 19.6 ft. It has got a fall of 17.5 ft. under full supply condition. Five hundred miles of new channels have been excavated. Dur-

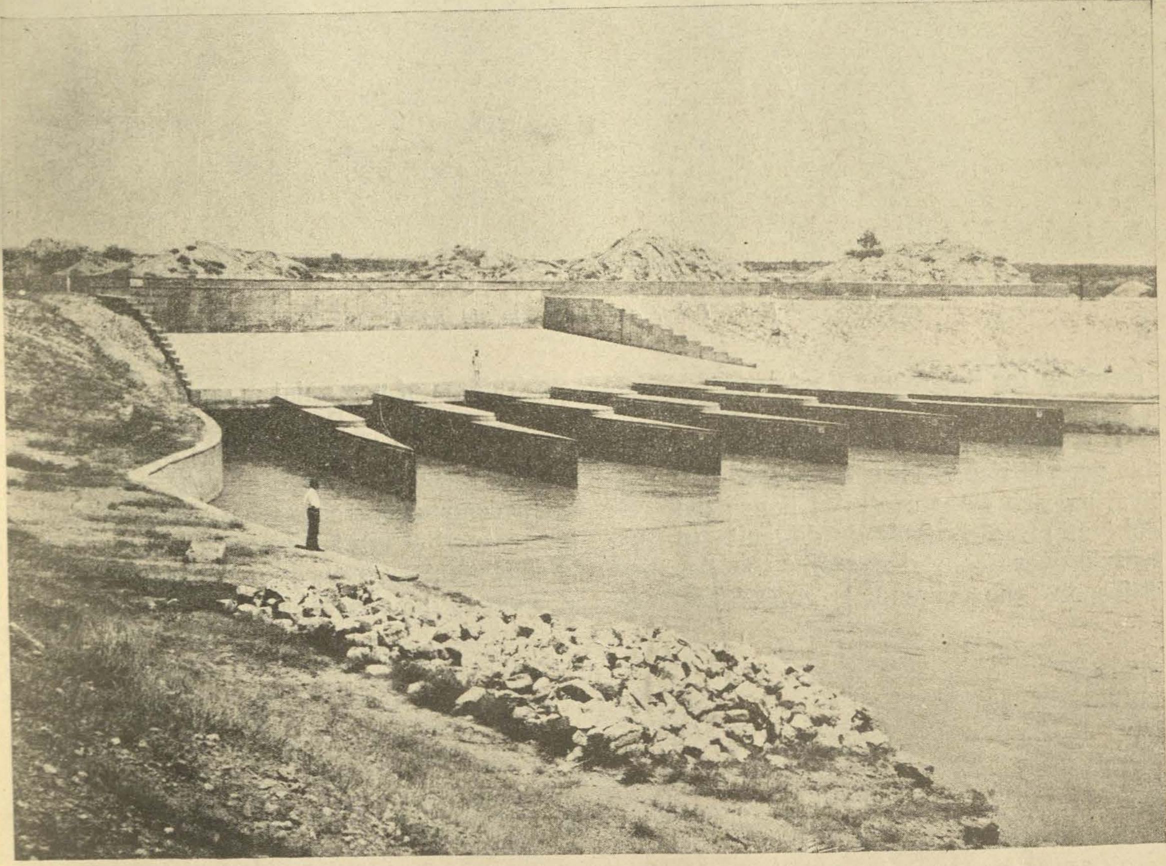
ing this year alone it is proposed to complete 14.5 crores earthwork on channels and bunds. From this, it can easily be deduced, the quantity of task involved and done from the start of the Project. The net work of Canals in this area will give perennial supply to 3,50,000 acres and an assured non-perennial supply to 2,50,000 acres on the right bank of the river Indus. The effect and impact of the development of 6,00,000 acres in this tract, can well be imagined, on the economic growth of the people of this area and the increase in the food products specially rice. The cultivation has increased five times when compared to the cultivation done during 1947.

Indo Bund, Keti Bund, Humbus Bund:

It is also proposed to extend the existing Baghar Ochto Bund parallel to river and then to sea passing Keti-Bunder to DEH Adano thus surrounding the Ochto tract. The total length of Bunds is 43 Miles. This will protect Ochto tract from the river and sea.

Drainage:

A systematic programme based on recent scientific knowledge for the design and construction of drains is in hand. A separate division has been created to fight the twin menace of water-logging and salinity.



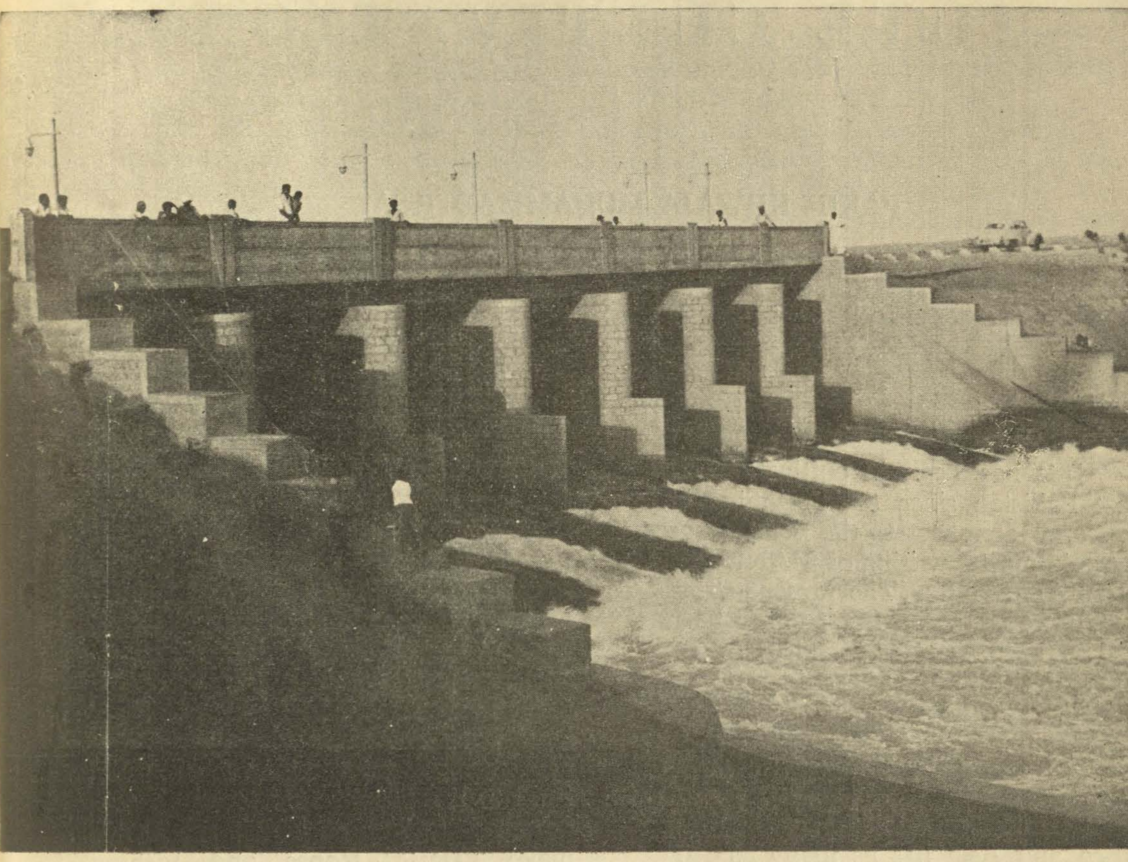
A view of the Supper Passage of Kalri Baghar Feeder.



Kalri Lake, a popular picnic point.

Demand for Sugarcane Factory:

The staple food of the population of this area is rice. They have been cultivating rice since centuries hence the cultivators are finding difficult to switch over from rice crop to dry crops, in the perennial zone. The cash crops of perennial area are cotton and Sugarcane. Practically no cotton is done and it is also doubtful whether its yield can be economical. The only cash crop which can grow well and give a good return is sugarcane. Hence a sugar factory in tis area will prove a boon to the cultivators.



P.Q. Fall of Kalri Lake.

Drinking Water Tanks:

The scheme is formulated to provide sweet drinking water facilities in the non-perennial area. An earthen Bund divides the combined tank into 2 portions, cattles. 22 such tank the other for cattles. 22 such tanks have been constructed and five are in progress.

The Agricultural Development Corporation is fully alive to the problems of this area. They are trying their best to solve these problems and develop this area within the shortes possible time.

JUTE CULTIVATION

FAKIR KHWAJA MUHAMMAD ISSA,

Zamindar, Mirpur Bathoro

District Thatta.

Jute has been in cultivation in East Pakistan since the beginning of time and references to the plant occur in the immortal writing of MANU and AIN-I-AKBARI. The present name Jute, however, seems first to have been used in 1746 as prior to this date the name of the fibre was referred to as "PAT".

2. The present day commercial jute, which is to be found extensively in tropical and sub-tropical parts of Africa and Asia has as many as 97 species but only eight of them exist in Pakistan, and out of these eight only two species namely, Chorchorus Olitorius (Locally known as Tossa) and Chorchorus Capsularis (Locally known as white or Desi) yield fibre of commercial value.

3. Chorchorus Olitorius (Tossa) is a tall deep green plant, with a sweet taste of leaves and bears cylinderical pods. The seed is small and bluish and the fibre is silky yellow and soft. Whereas the Chorchorus Capsularis (Desi) is a short, light green plant, with a bitter taste of leaves and bears round capsules. The seed is big and brown and the fibre is whitish and coarse. Thus the Tossa variety with its silky fibre fetches a higher price than the other variety.

4. Without the knowledge of the Government or the various Agricultural departments at least two varieties of Jute have been grown in this area mostly in Taluka Jati and Taluka Mirpur Bathoro since many years. These two varieties grown for domestic use namely White Jute Locally known an "Sini" and Benda "Sujato" have been grown in abundance for the past hundred years or more. The local White "Sini" Jute is rough and coarse fibre out of which the locals make "Daris", Ropes and Fishing nets. This is done by hand and on a limited scale only for domestic purposes and the raw fibre is sold at the rate of Re. 1/- per seer. The other variety, Benda "Sujato" Jute is yellowish soft and silky, from this special cot nettings are made. The woven fibre is sold at Rs. 4/- per seer.

5. This year three maunds of high quality seed was procured from East Pakistan by Mr. Abu Nasar, CSP, Commissioner, Hyderabad Division who through the Deputy Commissioner Thatta Mr. Shahjehan S. Karim. C.S.P. distributed the seed to various zamindars of this District. I received seven seers of this high quality seed which I used in two acres of land as an experiment.

6. The Deputy Commissioner Thatta, Mr. Shahjehan S. Karim, CSP took special interest and encouraged the local zamindars towards Jute cultivation. He sent samples of the locally grown jute to M/s Amin Jute Mills Kotri and they undertook to lift all available jute grown in this district. Through the good efforts of the Deputy Commissioner the District Council has obtained hundred maunds of jute seed from East Pakistan for cultivation in the coming season. The prospects of jute growing in this area are very encouraging but organized efforts are necessary to make our experiment a success. Policy dictates and practibility and economics sanction that concentrated efforts should be made to cultivate jute in this district.

7. Jute thrives best on alluvial loamy soil in regions with high temperiures and most climate with more rainfalls. Rainfall can be substituted by irrigations provided that the atmospheric humidity is high. Thatta District enjoys temperature, ranging from 70 F to 100 F with a humidity of about 90% and thus it is ideal for jute cultivation. From my experiments I have found that jute is a quick growing plant, its response to artificial fertilizer is good. Early in the growing season weeding should be done as often as possible. To prepare the land three to five good ploughs are recommended. After watering the land in May and preparing the land jute can be sown in two methods, either by Drilling (NARI) method or by Broadcast (CHAT) method. The first watering should be given 10-15 days after planting of the seed. Jute needs periodical water and water should not be allowed to stand for long periods, and two doses of Artificial manure during the growing of the plants are recommended.

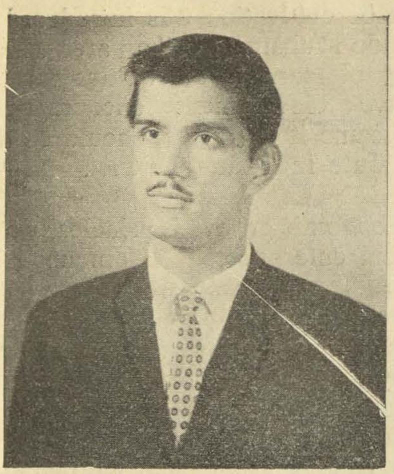
8. Jute should be sown perferably in the begining of May and seed rate of 3-5 seers per acre is recommended. The sowing is usually done by broadcast although it can be shown by drills (NARI) also. The harvesting time depends on the sowing but in order to save the quality of the fibre it is necessary to harvest the plants before the flowers are set. After harvesting, the plants are tied small bundiles and left in the fields for about 2-3 days during which time the plants shed their leaves, then the bundles are submerged in water for a period of about 10-30 days for retting; the fibre is then separated from the stalks and washed in clean running water. The quality of the fibre very largely depends on the washing the fibre gets. From my experiments I have received an output of 7-10 maunds per acre fibre and 3-5 maunds per acre seed.

9. This means on an average the income per acre will be about Rs. 500/- and as the plants reach height of 15 to 17 feet the quality of jute here, if given the right encouragement, will be no less than that produced in East Pakistan. As a bold step is required to ensure prompt and proper supply of high quality pure seed of jute so that Pakistan can maintain its pride of place as a country producing high quality jute. It is problematic, for all the necessary requisites for producing 200,000 maunds of high quality seed could not be found in East Pakistan, the need however is pressing and alternative source must be found. What better than Thatta District?

10. Also if Government has a real desire to fight waterloggin and salinity jute cultivation should be encouraged to replace paddy in his area. As jute only needs periodic water while paddy needs standing water, jute cultivation will help to solve this important problem of this area. It is now the duty of the State to come to the help of farmers and

encourage them to cultivate this plant. No farmer is in a position to singly invest in research let alone the very poor farmers of this very poor and neglected District. Certain encouragements and rewards for Jute cultivation in West Pakistan are necessary such as Land Revenue remission for the first five years, Loan arrangements and cash prizes for jute cultivators, for only then will the people of this area be encouraged to take the lead and change over from paddy to jute.

11. We in this District have been very lucky to have a Deputy Commissioner, Mr. Shahjehan S. Karim, CSP, who is willing to help the poor people of this area to face their problems and make an earnest attempt to solve them. A Thatta District Jute Growers Association under the Presidentship of Mr. Shahjehan S. Karim, CSP, and General Secretaryship of young and energetic foreign educated zamindar of this area Sayad Tahir Husain Mashhadi of Durro Taluka Mirpurbathoro is already doing its best to promote jute cultivation in this area. Now only Government support and encouragement is required to change this very poor Paddy growing area to a rich jute cash crop growing area and at the same time to raise the social and economical condition of the cultivators.



JUTE GROWING

SYED TAHIR HUSSAIN MASHHADI,

General Secretary Jute Growers Association, Thatta.

Experience derived from economic development points to the importance of National programmes which rely upon substantial Private enterprises to reinforce their objectives. Rural development is more than a social duty to the less advantaged portions of the population. It is also a fundamental condition for the maintenance of the high rate of development for the society as a whole, especially its industrial sector.

Jute if successfully cultivated in Thatta district can play three distinct and vital roles in the early stages of Pakistan's development process. First obviously Thatta District can supply the raw material required by Amin Jute Mills Ltd., Kotri. Furthermore expansion of Jute cultivation is helpful as required working capital for non-agricultural developments to generate raw material for industry and earn foreign exchange. Finally a rise in agricultural incomes (which Jute will bring) can provide an important direct stimulus to other aspects of development. It can provide expanded markets for chemical fertilizers, equipment and manufactured consumer goods and form a critically important source of increased incomes for the farmers and tax revenues for the Government, and at the same time considerably raise the social and economical conditions of the very poor cultivators of this area.

The conditions for growing Jute in Thatta appear to be very good but organised effort is necessary to make the experiment a success. The fundamental requirements of Jute are plenty of water during growth and more than plenty for retting and washing of the fibres. Jute thrives best on alluvial loamy soil in regions with a high temperature, moist climate and high rainfalls. Rainfall can be substituted by irrigations provided that the atmospheric humidity is high. As Thatta District enjoys temperatures ranging from 70°F to 100°F with a humidity of almost 90%. It is ideal for the growth of this plant. As white Jute (Chorchorus Capsularis) is suited for both high lands and lowlands, and the other variety Tossa (Chorchorus Olitorius) is suited for growth on the high lands only. This would mean that efforts to grow Jute in Thatta District should primarily be directed towords Olitorius (Tossa) variety. This is indeed fortunate as we will be able to produce high quality Jute.

L (iv) 432—15

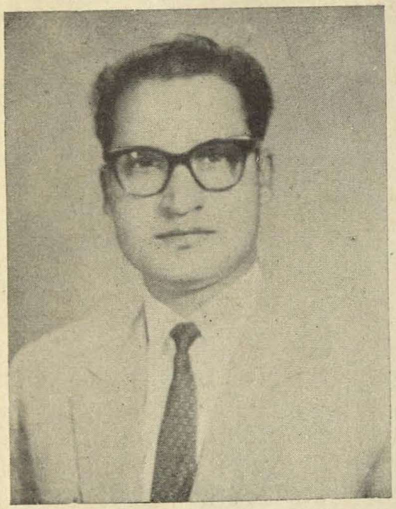
As bold step is required to ensure the continuity of supply of high grade pure seed, so that Pakistan can maintain its pride of place as a country producing high quality Jute. It has been found problematic to supply 2,00,000 maunds, the necessary requisite in Pakistan. The need being very pressing, an alternate source must be explored to fullfil this need, and what could be better than West Pakistan.

I believe that agriculture is the venerable mother of all the arts and compared to the other trades is certainlly friendly to the mind, it is next to commerce in this respect but must necessarily preside commerce in the growth of society. I firmly believe that given the active Government support Jute can be successfully cultivated in this region. The fact that some of the more advanced zamindars are willing to face their problems and make an earnest attempt to solve them, does not mean that the change over to the crop will be easy; certain encouragements such as a Tax-Holiday of the land Revenue for the first three years to encourage the peasants to take the lead are recommended.

The evidence and experiments indicate Jute can be successfully grown in Thatta District, Policy dictates practicablility and economic sanction that concentrated efforts should be made in this area to cultivate Jute. The farmers of this area being very poor cannot afford to invest in research and most of them can not even afford to prepare the land or buy the very expensive seed. It is imperative that some sort of special arrangement be made for loans from the Government, the Agricultural Development Bank and other sources. Sugarcan be cultivation was introduced in Tando Muhammad Khan area with the help of loans to the cultivators and active Government encouragement; the same if not more, should be done for Jute in Thatta District.

Economic growth is principally a National enterprise. The amount of resources made available from outside can be a critically helpful margin, but it is a margin which will have its effect only to the extent that those receiving aid are effectively committed to the development process as they wish to see it and are effectively mobilizing their human and material resources to do the job. My meaning being that it is all very well to recieve loans, and remmission but the cultivators themselves must be made to know about Jute cultivation. The education in this field is very important. booklets on the subject in English, Urdu and Sindhi should be printed and distributed free of cost by the West Pakistan Ministry of Food and Agriculture, to the local zamindars. Officers of the Agricultural Development Corporation should visit the rural areas and by means of films and talks bring to the notice of the cultivators the advantages of Jute cultivation. There is no single prescription for rural economical development. There are, as in all human enterprises, only problems. Some limited guidance from the experience of others, will serve the purpose.

I believe that we, the farmers of this District, with the active support of the Government can go forward with the greatest underlying confidence. The underlying forces of History are clearly on the side of the great humanistic tradition if we have the wit and the will, the faith and the persistence to work with them,



MINERALS AND MINING

M. A. FAROOQI,
Chief Engineer,
Dawood Mines Ltd; Jhimpir.

When one drives through District Thatta, small hillocks, slightly rugged topography, small variegated pieces of stones, here and there, stratified sedimentary rocks can be seen. Every where there is an almost barren deserted landscape, except some beautiful panoramas round Kalri Lake. These small hillocks and sedimentary rock formations are generally looked upon as things no more important and interesting than elements of scenic beauty, or one may consider Thatta District, in general, as a God—for saken country side. Few people may stop and think of the close relationship which exists between these barren deserted hillocks and most of the material comforts of civilised living. To give a few common examples, sand is the basic ingredient in the material of glass-ware. Highway, Buildings in small villages as well as in Makli, canals, bridges are produced from limestone. Cement, bricks, lime are the result of combination of limestones, clay, gypsum and sand.

Some of these materials have been used in certain parts of the district on a primitive scale since the time of the old city of Thatta, for instance clay for potteries, beautiful tiles and bricks, lime stone for buildings. But large scale industrial utilisation has been of comparatively recent origin and that also is confined to a few minerals. If a little more attention were paid a systematic and organised development of mineral resources, many a large scale industries could be based on them, and which would not only change the life and living standard of poor people of this district, as it is well known that Thatta is considered to be the poorest district of Sind, but might have made a real and significant contribution towards the national wealth.

Coal.

Coal is classified to be the most important mineral so far as industry and mechanisation is concerned. It is Pakistan's number one mineral and that of District Thatta as well. Wherever there is Meting Limestone, one may consider that there is a possibility of finding a coal seam under-neath.

Mining of coal is being done in Meting and Jhimpir areas, since the

time of pre-partition in 1930's and it has been proved that this coal field has very good potentials and now most of the concessions are held by W.P. I.D.C. and rest by some private companies. Last year about half a Lakh ton of coal was produced from this area.

Many companies have been operating in this area ever since the use of this indigenous coal was found out. Before independence this coal had a good market in Sind and Punjab as well as in East Punjab (India). But after partition there was a slump, and that resulted for the failure of most of the companies. Amin Coal Mines had taken over the Meting area and for the last few years they were the biggest producer of coal in District Thatta.

In Jhimpir area, Messrs. Herman and Mohatta were mining coal before April 1961, and due to lack of technical know-how and transport facilities, they could not succeed and sold their assets to Dawood Mines Ltd.

Mining so far has been practised in extremely crude and primitive fashion. One can see conditions today, similar to those existed in Seventeenth and Eighteenth Centuries of coal Mining in different countries. Nothing significant has been done to improve the conditions, except that Dawood Mines have taken some efforts to introduced the simplest kind of mechanisation and to work on modern lines. Diamond core drilling is in operation in order to explore the area and to facilitates the prospecting and scientific planning of Mines. To improve the ventilation system in the underground, mechanical ventilating fans have been introduced which ensures the safety and health of a worker inside the mine. So far, coal was mined and transported hundred percent by human labour but now modern means of haulage like scrapper chain conveyors, mine cars running on rail tracks with an underground Locomotive is being installed. This will improve the condition to a much greater extent and will definitely increase the output per man shift.

Electric power supply, good roads, and telephonic connections are bare necessities for an industry and unfortunately this coal field has no such facilities available. Therefore, the rate of progress is much too slow.

Besides the above mentioned drawbacks, coal mining industry is facing numerous problems which are of serious nature. First is the availability of labour. Out of the entire labour force only five percent come from local areas and the rest of them hail from northern and up country side. About 80% of labour come from Azad Kashmir and they only come to work during certain seasons of a year. During summer months they go back to Kashmir for harvest. However, to a certain extent labour problem can be solved by introducing some degree of mechanisation. But the question of sales and utilisation of this coal in our country is rather disappointing. Coal is supposed to be the back-bone of industrialisation but the fate of this coal at present is only for the use of brick kilns. And since this coal is laible to spontaneous combustion, therefore, it catches fire by itself when stocked in big heaps or kept for longer periods. Supply of empty railway wagons is always a big cry of mine owners, and sometime loaded wagons are unnecessary delayed in transit, resulting in fires in loaded wagons.

These impediments have almost made it impossible to transport this coal to far distances. At present this coal has only a limited market in nearby places in Sind and in brick kilns in Hyderabad Division.

Proper coal mining industry can not be set up unless some definite utilisation of this coal can be found near the coal field.

Experiments and researches are being carried out by Dawood Mines to use this coal near the site in such a way which should prove to be an asset for our country as well as to improve the status of District Thatta.

After studying of this coal it has been revealed that a low temperature carbonisation plant can be set up which apart from making this coal suitable for domestic purposes, will give valuable by-products. This coal can prove to be extremely useful for chemical industry. Tar, light oil, middle oil, heavy oil, colours, dyes, explosives, plastics, gas and other hundreds of chemical compounds can be produced out of this coal. But it is most unfortunate that there would be so many by-products in hand that it would be difficult to dispose them off

Possibility of setting up a vertical Kiln for Cement Clinkers is under consideration for which Limestone is available in abundance.

Silica Sand.

Silica Sand deposits are found near Jungshahi and in the same succession as coal formations near Dawood Mines, Jhimpir.

The main use of Silica Sand is in making glass. For this purpose both chemical composition and grain size are important. A good glass sand should be free from impurities such as iron oxide, Alumina and heavy minerals. The upper limit of iron oxide in sand for colourless glass is 0.02%, for optical glass it is much lower *i.e.,* 0.005%. SiO_2 contents should be over 99.5% grain size should be between 0.2 to 0.5 m.m. and the grain should be angular rather than rounded. Crude methods of mining and transport can create contamination of impurities in sand. Processing should be done at site, and storage of sand in open yards should be avoided.

Dawood Mines have tried to take some samples from a deposit close to their site and that was found satisfactory for building acid resisting floor for their Hydrogen peroxide plant in Karachi.

Lime Stone.

Lime stone is extensively found in the district of Thatta. Mining is being done at Buradabad and Jungshahi.

Bulk of it is used as building stone as such in concrete aggregate, rail road ballast, and can be used in portland cement, Asphalt filler, sugar refining, whiting, carbide manufacture and paper making. Big quantities of Limestone are supplied to Karnaphuli Paper Mills in East Pakistan from Buradabad.

Gypsum.

Gypsum is found in many places in the district of Thatta. It is used in the fertilizer factory, and in making of cement and plaster of paris.

Ochres.

It is extensively found near Jhimpir and can be used as pigements in paints industry which required finely grounded size of about 300 mesh. If a mill can be set up and facilities are provided for grinding, this may find a prospective market.

In conclusion one can see from the above facts that picture of mining industry in the district Thata is not so appealing. Holdings of many private operations are too small and it is being developed on a cottage industry pattern. The most disturbing feature is the sales and utilization of coal. It is time that Government may provide them the electric power supply, good roads and telephones. So that new plants and industries may be set up to utilize the products of mining industries. It would be in the interest of the national progress and prosperity.



JHIMPIR POULTRY FARM

I. Y. SHEIKH,

Director, Animal Husbandry, Hyderabad Region, Hyderabad.

A pure-bred flock of white leghorn breed is maintained at Jhimpir Poultry Farm. Pullets and Cockerels of the said breed are raised at this farm for distribution among the poultry keepers in rural and urban areas under the jurisdiction of the Directorate of Animal Husbandry. Hyderabad Region, Hyderabad. Hatching eggs and chicks are also supplied at reasonable prices.

People are advised to improve their indigenous poultry (native fowls) by 'upgrading' or 'modification' by crossing them with white leghorn males and thus to increase the egg production of native birds (cross-bred of white leghorn and desis) from 50-60 small size eggs to about 120 large size eggs in a year.

The poultry farm at Jhimpir also serves as a Poultry Demonstration Unit. The scientific modern methods of housing. feeding, breeding management and disease control measures are used at this farm. The Animal Husbandry field Staff of the said Directorate is given six weeks practical poultry training at this farm so as to equip them with the knowledge of modern methods of poultry production, enabling them to advise people how to keep poultry scientifically and profitably.

The main features of the farm are as follows: —

1. Housing.

Layers are kept in intensive houses in groups of 199 layers in each house. Cockerels are housed in semi-intensive pens and kept separate from females except during breeding season (Nov. to March). Paddy husk 4-6 inches deep is used as litter in poultry pens. It is occasionally stirred to remain loose and kept completely dry and replaced with fresh litter once in a year, before fresh lot of pullets is housed in.

The poultry pens are so designed and constructed that birds feel comfortable in all the seasons and remain safe from predatory animals. Neither hot, cold and strong winds (draft) hit the birds nor they get wet from rain.

2. Brooding and rearing of chicks.

Brooding of chicks from day old to 4 weeks age is done in canopy brooders

heated by kerosine oil. The brooders are placed in pacca brooder houses. The temprature is maintained ranging from 95° F to down 75° F, gradually reduced from 95° F to 85° F in the second week and from 85° F to 75° F in the 3rd week after 4th week chicks are strong enough to live and grow in atmospheric temperature. From 4th week to 6th week age chicks are kept in the same pens but without any artificial heat. At the age of 6 weeks they are shifted to semi-intensive rearing pens where they are kept till maturity. A well balanced ration (All dry mash feed) containing 20% protein is given to chicks upto 8 weeks age. From 9th to 20 weeks age they are *fedration* with 16% protein.

Feeding.

The following formula is used for feeding chicks the growing chickens and the adult birds at the said farm.

(*a*) *Mash.*

Feed ingredient		Percent (quantity in 100)
1. Yellow maize atta.		30%
2. Wheat atta.		25
3. Barley atta.		15
4. Wheat bran.		6
5. Fishmeal.		10
6. Non fat-dry milk powder.		8
7. Bone meal.		2.5
8. Liver stone flour.		2.5
9. Common Salt.		1
	Total	100 lbs
10. Cod liver Oil.		1 lb
11. Mangnese Sulphate.		4 oz per ton of feed.
12. Rit of lavin.		4 oz ,, ,,

(*b*) *Brain Mixture.*

(*a*) For Chicks. Yellow maizegrit and broken wheat half and half.

(*b*) For adults.

(*i*) whole wheat 2 parts.

(*ii*) Yellow maize grit I part.

(*c*) Green lucern to all birds daily at I oz per bird per day.

(*d*) Mash is fed dry adlib (as much as they eat)

Grain is fed in limited quantity as under:—

Chicks of 8 to 12 weeks age ½ oz per chick per day.

Chicks of 13 to 16 weeks age ¾ oz per chick per day.

Chicks of 13 to 20 weeks age 1¼ oz per chick per day.

Birds over 20 weeks 1½ oz per chick per day,.

(*e*) Fresh, sweet, clean and cool water is made avaible to birds all the times in grit hoppers.

4. Breeding.

Birds for breeding are selected by handling in view of their vigour, breed characters and points for being a good layer.

5. Disease Control.

In order to keep the disease away from the farm the following measures are adopted.

1. The rigid sanitary measures are used to keep the poultry pens free from disease producting organisms. The pens, house fixtures, dying boxes feeders drinkers etc. are thoroughly cleaned and disinfected after every 8 or 10 days which breaks the cycle of development of harmful micro-organisms and thus chance for the spread of diseases are reduced to least.

2. Over-crowding is never allowed in poultry pens. Adequate spacing is provided for perching, feeding, drinking and to roam about for the number of birds housed together in a pen.

3. Birds are houses age, sex and size wise. Young birds are kept separate from elder birds.

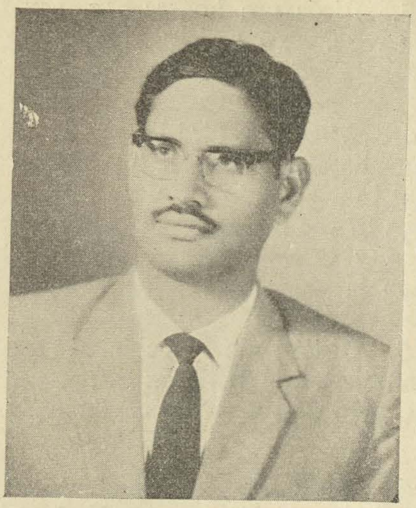
4. When any bird looks sickly it is immediately removed from the pen and kept in segregation to watch the symptoms of the disease. In case of doubt of any infectious disease the whole flock is given preventive treatment.

5. Chicks are vaccinated against Ranikhet, and fowl pox diseases at the age of 6 and 8 weeks respectively.

6. Birds are dewormed at 12, 18, and 22 weeks of age to keep them free from round and tap worms.

7. Under on circumstances, any bird from outside is brought and mixed in the flock. Visitors are not allowed to roam about near poultry pens except in special cases when permitted to visit the farm.

L (iv) 432—16



SOCIO-ECONOMIC STUDY OF THATTA

KHALIL YAHYA SIDDIQI,

Lecturer in Economics, Government College, Thatta.

Man forms a part of the 'landscape. He is a modifying element that humanizes it. The 'landscape' keeps the man in bondage. The far-reaching grip holds tight the destinies of mortals incorporated in it. Any socio-economic study of any 'landscape' remains incomplete if the 'environment' is not studied.

History has lately been construed in terms of 'challenge' and 'response'. Challenges are thrown, if accepted, response is given. It follows by other challenge and it response. The cycle is unending. If men, at any stage, are not in position to respond a challenge they are elbowed overboard. It is the unwritten law of nature. The manifestation of this principle seems to be writ large on the ruins, graveyards mounds, waterlogged and erosion-ridden land of Thatta.

The date of the foundation of Thatta still remains a question. Historians, native as well as foreign, have attempted to unravel the shroud of mystry that has wrapped its past, and has even made the name of its founder a prey to dumb oblivion; but to no avail. Tales reign supreme when the truth is unknown. Diversity and contradictions of accounts in respect of the origin of this city baffle a reader and leave him quite flabbergasted. It is the reign of Sultan Muhammad Shah Tughlaq that the name of Thatta is found mentioned in the annals. Thereafter it played a very important part in the history of Sind and was capital of many dynasties of Lower Sind—the Sumras and Summas the Tarkhans and Kalhoras.

In 1843 the Province of Sind, after its annexation by the East India Company, was divided into three Districts and Thatta was included in Hyderabad District. Later on it was merged with Karachi. After the establishment of Pakistan, Karachi was made the capital of Pakistan. Thatta was then declared a separate District in the former Province of Sind.

Physical Features.—River Indus divides the District into two parts. The soil, derived mainly from rocks and drifted silt, is sandy alluvial in character and is sandy or clay loam. The north western area is hilly but the central area which comprises the Indus basin is rich in soil. The south-western area is sand 'Kallar' and

sea-affected, while the south-eastern portion adjoining the Rann of Kutch is desert like sandy area.

Rainfall is scanty and varies in different parts. The average yearly rainfall is six inches. The climate, almost all the year round, is moderate and is tempered by sea-breeze, although humidity augments during summer.

Population.—Thatta rose to prominence during the Mughal rule in India. The information that is at our command is but scanty and sources a few. The only available population reckoning dates back to 19th Century soon-after the annexation of Sind in the East India Company's domain. However, at the peak of its glory in the 17th century it has universally been acknowledged as one of the largest cities of India. Besides in the East India Company's records of 1607 Thatta has been described as a great city as large as London'. Staticians like John Graunt and Sir William Petty estimated the population of Thatta as 2,24,275 in 1605.

An idea about the size, growth and distribution of its population to-day may be had from the following table:—

The total population enumerated in 1961 was 3,61,733 whereas the population enumerated in 1951 was 2,90,343. The percentage of increase during the last decade works out to 24.6% i.e. slightly more than 2.4% per year. The accelerated rate of the growth of the population may pose serious problems for socio-economic development of the District.

In 1961 Census, the urban population has been recorded as 20,877 as against 9716 recorded in 1951. It has registered an increase of 114.98% The drift towards the urbanization of population is indicative of the trend of mobility from agricultural occupation to the vocations available in towns.

The Census report reckons the civilian labour force above the age group of ten years as 1,21,236. Three quarter of this figure has been reported to be bound to the soil for their subsistence. According to most conventional estimates 2.5 acres per capita is the absolute minimum of arable land necessary for the subsis-

Year	1941	1951			1961		
		Total	Urban	Rural	Total	Urban	Rural
Population	2,78,013	2,90,366	9,716	2,80,650	3,61,733	20,887	3,40,846
Increase of population over preceding census.	—	12,353	..	..	71,367	11,171	60,196
Percentage of increase over preceding census.	..	4.4	..	..	24.6	114,98	21.4

Source.—Thatta District Census Report 1961.

tence level in any agarian society. But unluckily Thatta falls short of this cenventional norm, as the per capita acreage of cultivable land even works to less than an acre. With such a low co-efficient of production and subsistence it is aprehended that if the present rate of the growth of population continues, the agriculture may not be able to sustain the pressure of population. It is high time that serious efforts are made to reduce the pressure of population on agriculture by developing industries, small or cottage, in order to find an opening for the surplus labour force.

Trade & Commerce.—Thatta in the 17th Century was the first city of supreme importance and there was no city which carried on greater trade in North of India. It was the emporium of trade, the bee-hive of commercial activity, the envy of most of the cities of orient and occident. Thatta was at the peak of her glory in the Mughal period in India. Its commercial activity seems to have drawn liberally on her martime potentialities. It was a large and busy river port, connected by means of an efficient system of river transport with Lahore and Multan. Goods were also brought from Agra to Multan by carts and then sent down the Indus, to Thatta. It was also connected through a land route to Ahmadabad and there was a brisk trade between these two cities. The Ain-i-Akbari bears a testimony to this effect. According to Abul Fazl, "In every part of His Majesty's empire ships are numerous, but in Bengal, Kashmir and Thatta they are the pivot of all commerce......It is a busy port with 40,000 boats large and small". By the third quarter of 17th century the tide ebbed and Thatta fell from its height. As early as 1667 Tavernier could see the decadent trend in Thatta's maritime trade, This note of dispair seems to resound in his words "The trade of Thatta, which was formerly very great begins now to decay because the mouth of river grows more dangerous and full of shallows every day more than another, the sand hills having almost choked it up".

Inavailability of trade statistics and scanty information in respect of internal trade, make one grope in the dark when taking in hand the study of industrial and commercial potential of Thatta. According to rough estimate Thatta's main trade is with adjoining districts of Karachi and Hyderabad. River borne trade which throve in her palmy days had a set back because of the development of rail and road transport. For the present Thatta supplies only Sea Salt, Pulses, Firewood, Oil seeds, lime stone, coal and fish to the adjoining areas.

Industry.—Cottage industry flourished immensely in the good old days of Thatta's glory, but it is conspciuous by its absence to-day. Lungis are still printed in Thatta and are in great demand even to-day although the industry has been reduced to a mere shadow of its former-self. The influence of Persian decorative art in them is easily discernable. Thatta was reputed for the manufacture of cotton cloth of different kinds *e.g.* calicos and baftas, chintzes, muslin and lawn. It was equally famous for the manufacture of Silken and Leather goods. In 1635 East India Company established her first factory in Sind with its head office at Thatta in order to buy cotton cloth, indigo and salt peter. The British factory continued its operation for 27 years. It appears that the factory could not withstand the ravages of plague and famine which swept most part of the people. The factory was withdrawn. The unsettled

political conditions in the country also made its impact felt on the industry of the town and even to-day it is in the throes of death—a skeleton of her former-self.

Salt manufacture is the only major industry in the District to-day. The industries which have been registered under section 5 (l) and 2 (j) of the Factory Act 1934 are as follows:—

Kinds of Industry	*No.*
1. Salt and Chemical Works	4
2. Silk Weaving Factory	1
3. Carpet factory	1
4. Bone meal factory	1
5. Minerals and Refractories	1
6. Explosives factory	1
7. Cement pipe factory	1
8. Rice Mill	1

Source.—Central Statistical Office, Karachi.

After the establishment of Pakistan the small scale industries in the District suffered not only from official neglect but also from a general public apathy. Economic equilibrium, in an agricultural District like Thatta where the pressure of population on land is great, can only be restored if a considerable section of the population is absorbed in small scale or cottage industries. Thatta posseses immense potentialities for the development of following small scale or cottage industries, a few of which can, however, be established on large scale:—

1. Fabrics of Cotton.
2. Fabrics of man made fibre.
3. Printing & Dying of fibre.
4. Glazed pottery and tiles.
5. Sugar.
6. Leather.
7. Paper.
8. Glass.
9. Mats.
10. Ice.

The servey conducted by the Small Industries Division, West Pakistan Industrial Development Corporation in April 1961 revealed the existence of only 24 small industrial units in the urban areas of Thatta. The report did not classify industries on the basis of production. However, these units include Rice Mills, Oil Mills, Floor Mills, Mats manufacturing, Bricks Kiln. Furniture works, Beverages, Glazed pottery works, Lungis printing works and rough woollen Carpet work etc. The product of these industries in mostly consumed locally.

Agriculture.—Agriculture is the main occupation of the people of Thatta. About 94% of the people, living in rural areas in 556 villages sprawled all over, are dependent directly or indirectly on agriculture. Most of the land is unarable as the district mostly comprises hilly tracts

and sand. So much so only 32% of the total land is cultivable of which only 25% is under cultivation at present. Forest covers about 2% of the total area. Patches of arable land in the hilly region are cultivated only during mansoon or at certain places lift-irrigation is restored to, while G.M. Barrage canals are the main sources of irrigation in other areas. The riverine kucha lands are cultivated on river spill.

The total area cultivated in 1947-48 was 2,55,167 acres. Subsequently by the opening of new canals more land was brought under plough and by 1962-63 an increase of about 50% over 1947-48 acreage was recorded. Efforts are being made to bring more and more land under cultivation so that the District besides becoming self-sufficient in food, may also be able to feed other areas. It has been reported that about one and a half million acres of land would be irrigated by G.M. Barrage when it is finally completed. Moreover considerable amount is also being distributed to farmers for the rehabilitation and improvement of agricultural land, through various agencies. More than a million rupees have so far been advanced to farmers particularly of G.M. Barrage areas, by Agricultural Development Bank since its establishment in 1961. Besides, almost an equal amount was also distributed to the farmers by District Authorities during 1962-63 as Taccavi under Agriculture Loan Act and Land Improvement Act.

Rice is the major crop cultivated in Thatta, as it thrives most in high temperature and abundant moisture. In 1959-60 the total acreage under rice was 1,98,450 acres about 60% of the total cultivable area. During 1960-61 another 13,000 acres were added for the cultivation of Rice. Despite the largest acreage of land under rice the average yield per acre has been estimated as 8 maunds per acre.

The low yield of production in Thatta has generally been attributed to the soil deterioration by water-logging and salinity and primitive methods of cultivation. The soil of Thatta is not naturally poor but has been made impoverished. It is truism in agriculture that what is removed from the soil in the form of crops must be restored to it in some other form; as continuous cropping without manure impoverishes even the richest soils. Artificial manures, fish or bone manuring are not very popular in the village community. Absence of manure is deteriorating the soil which in turn is telling badly upon the yield per acre. To crown above all the supply of siltless water through Kalri lake is adversely effecting the agricultural production. The rate of increase in salinity and water-logging per annum is not accurately known but it has been accepted beyond doubt that it is the most serious technical problem and needs early remedy. For the present suitable drains are being excavated to combate the menace of water-logging and salinity in the District. Extensive spraying is also carried by the Agriculture Department to kill pests and other insects.

Besides Rice, wheat, maize, bajra, jowar, gram, pulses, oil seeds, sugar-can and cotton are also grown in the District. Recent researches have yielded encouraging results for the cultivation of Egyptian like Cotton and Jute in the District.

Education.—Thatta which was reputed for learning in Theology, Philology and Politics and was having more than 400 educational institutions, has

now ben reduced to a mere shadow of her formerself. Today hardly one-tenth of her population is literate and three fourth of literates do not possess knowledge beyond primary level.

Upon education falls the supreme task of preserving the national ideals and building up the national character. An illiterate society clings to customs. traditions and outmoded practices. It resists the forces of change which stimulate the acquisition of new knowledge and new skill. This fact is particularly noticeable in agrarian society of Thatta where peasantry jeers at the new ideas and mocks the advanced methods in agriculture. It is due to the reactionary and conventional approach to the problems of life which is so typical of a society which is backward in education.

After the establishment of Pakistan the District was faced with staggering problems. In education the immediate task was to save the system from collapse, a task which was made difficult by the loss of supervisory and teaching personnel. It was nevertheless performed. Existing schools were maintained and new established. In 1947 there was only one High School and 126 Primary Schools. There has been a considerable increase in the number of educational institutions and enrolment since then. At present there is one College, six High Schools, 13 Middle Schools and 502 Primary Schools Efforts are also being made to provide technical and vocational education to the students.

Housing.—The housing and settlement programme embraces the planning of physical environment essential for the harmonious development of urban and rural communities . That is the most neglected district in this aspect of social life. Living conditions in urban areas are far from satisfactory what to speak of rural areas. The rapidly growing population has outpaced housing community service with highly deleterious effects on health and social conditions. In urban areas of the District water supply, sewerage, drainage, electric supply, internal road net works and communication system are quite inadequate. Communal facilities in rural areas are extermely poor.

The Census of Housing conducted in 1960 by the Census Commissioner revealed that only 74285 housing structures existed in Thatta District. The figure include 4336 houses in the urbank llocaliies.

In order to improve the community services in the District particularly in rural areas a sum of about one and half million rupees has been allocated during 1963-64 by the West Pakistan Government for the execution of various programmes of rural development. Besides this 159 miles of Metalled Roads and 214 miles Kacha Roads are also being constructed by the Agricultural Development Corporation in the District.

In order to achieve the desired result of any programme of development a comprehensive Socio-Economic Survey seems imperative in view of the scanty data available for the study of Socio-Economic problems. Thatta, it appears has not had its proper and due share in the programme of national development. It is high time that all the needs of the people are properly assessed and the existing ailments remedied.

—:oo:—

A REPORT OF RURAL WELFARE PROJECT

R. R. JINNAH,

Chairman,

The Rural Walfare Committee

Ismailia Youth Services, Karachi.

Under the Rural Welfare Project jointly sponsored by the H.R.H. The Prince Agakhan's Thatta District Council and the Ismailia Youth Services, Karachi, a socio-economic survey was undertaken in the month of May/June, 1963 in thirteen villages of Thatta District with a view to study the population and economic structure of the people residing in those villages, to assess the educational, health and medical, recreational and other facilities available there and to bring to light the felt and unfelt needs



Mr. R. R. Jinnah, Chairman, Rural Welfare Committee, Ismailia Youth Services, Karachi, presenting the report of the activities to the Deputy Commissioner.

of the people, with a view to point out the scope of the social work.

The purpose of the Project is: to assist the people of the area to develop their resources and organise themselves for carrying on social welfare and other projects mainly on self help basis; to help bring out and develop the potential and latent capabilities of individuals, groups and village communities, thereby helping them to help themselves and to live a satisfying and useful lift.

Based on the survey, a short-term plan containing the following schemes for socio-economic development of the people of the area, fixing priorities, were formulated:—

1. Setting-up of a girls primery School at Mahmoodabad.
2. Recruiting a nursery teacher for newly-established Nursery School at Ghulamullah.
3. Setting-up of a Vocational Training Centre for men at a major village to be decided upon.
4. Setting-up of a Home-Craft Centre-cum-Industrial Home for girls over 14 years and women at a major village to be decided upon.



H.R H. Girls Primary School, Mirpur Sakro.

5. Study of the working of the existing Co-operative Societies in the District.
6. Setting-up of an Agricultural Co-operative Society for the whole District.
7. Organisation of Scouting and Girls-Guiding at Ghulamullah.



A class room view of the H.R.H. Girls Primary School, Mirpur Sakro.

The work has commenced in right earnest according to the schedule from the month of August, 1963. After the Survey Report having been delibarated upon by Agakhan's Thatta District Council, Vur, a conference of the workers and the leaders of the area was convened at Mirpur Sakro where the committees as stipulated in the Report were formed in the beinning of September 1963.

Since then the committtees have worked hard and in course of about six months, the following achievements have been made:—

1. One Primary Girls School of Mirpur Sakro has started functioning for 1st December, 1963.

2. Two more Primary Girls Schools and one Nursery School at Mahmoodabad, Buharo and Ghulamullah respectively will start functioning in about two months' time.

3. The preliminaries for setting two Agricultural Farming Development Societies have been finalised and the same will be given a concrete shape in two to three months' time.

On 3rd of this month a copy of the Survey Report along with report of the progress made so far was presented to Mr. Shah Jahan Karim, C.S.P.

The Deputy Commissioner, Thatta District, who, while expressing the the satisfaction on and appreciating the laudable efforts being made by the Ismailia Community for ameliorating the conditions of the village people of Thatta District, had assured every possible assistance and guidance required for speeding up the programmes formulated for the welfare of the people under the project.

The socio-economic development of the Country is the need of the time and more so when it is the question of development of rural areas. Reorgansing this and also understanding the wisdom clothed in the following words spoken by the President of Pakistan in his broadcast speech delivered on the first day of the year, it is hoped that more welfare agencies of Karachi and other cities will come forward to extend their operations to the rural areas.

> "………next to the unification of the nation comes the need for socio-economic development. Without it, we will not be able to hold our own freedom in this fast progressing world".

SOCIAL ACTIVITIES

M. ZAHEER KHAN.

Ex. Joint Secretary,

Makli Gymkhana

Inadequacy of social life in Thatta assentuated the feelings of loneliness among the officers of various Departments serving in this historical District Headquarters. On return to one's quarters after a streneous day's work one needs some recreation to keep oneself in good humour and in better morale. The absence of family and one's children makes loneliness more conspicuous and does not keep one in good frame of mind which vitally affects efficiency and the departmental work to which one belongs. There



Members of the Makli Gymkhana being introduced to the President, Mr. Shahjehan S. Karim.

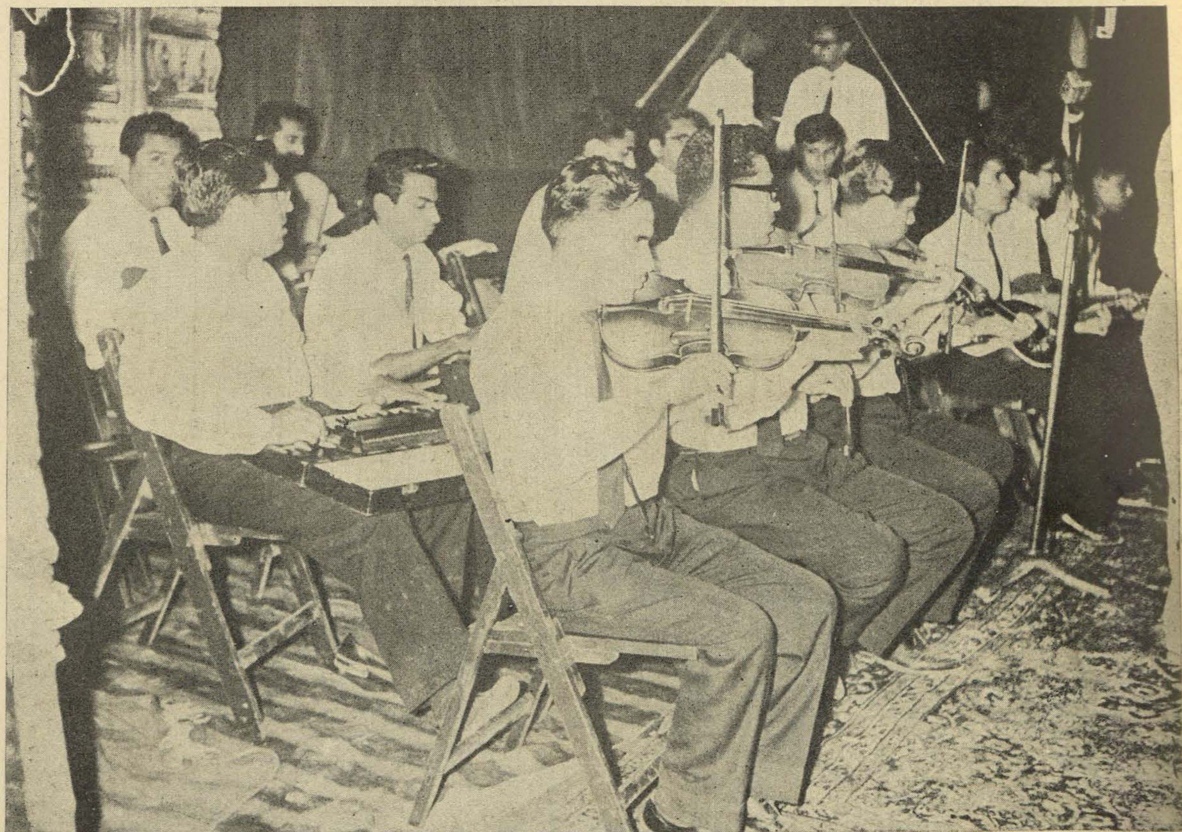
are large number of officers serving at this District Headquarters who badly needed an institution for their pastime.

To promote social life and to create ways and means for constructive activities, Mr. Shahjehan S. Karim, C.S.P., Deputy Commissioner, Thatta, conceived the idea of the formation of a club A meeting was called for this purpose in which alite of the town and the officers of the various Departments serving there participated and the suggestion was welcomed by all the persons present. A site was selected for the Gymkhana at a conspicuous place. Then there was a question of raising the funds for the building of the club. With the active help and cooperation of the Deputy Commissioner, Thatta, the District Council contributed Rs. 10,000/- and Zamindars and businessmen also made generous contributions. Mr. Bashir Ahmad Shah, an M.P.A. made a personal denotion of Rs. 15000/-. The foundation stone laying ceremony of the Gymkhana was performed by Mr. Abu Nasar, C.S.P. Commissioner, Hyderabad Division. It was a colourful ceremony. After the usual speeches, wherein the Commissioner appreciated the spirit of cooperation and hard work, tea was served. Kalan Kawal, a famous radio artist presented Qawwalis.



A general view of the audiance at the cultural show.

With the generous cooperation of all concerned soon the imposing Gymkhana building was constructed. The opening ceremony of the Gymkhana



H.R.H. Agha Khan's Orchestra presenting a musical concert.

was performed by Mr. Shahjehan S. Karim. A cultural show was also organised on this occasion. It was an Impressive Ceremony. People from Karachi and Hyderabad came to attend the show. Artists of national fame delighted the audience with their performances.

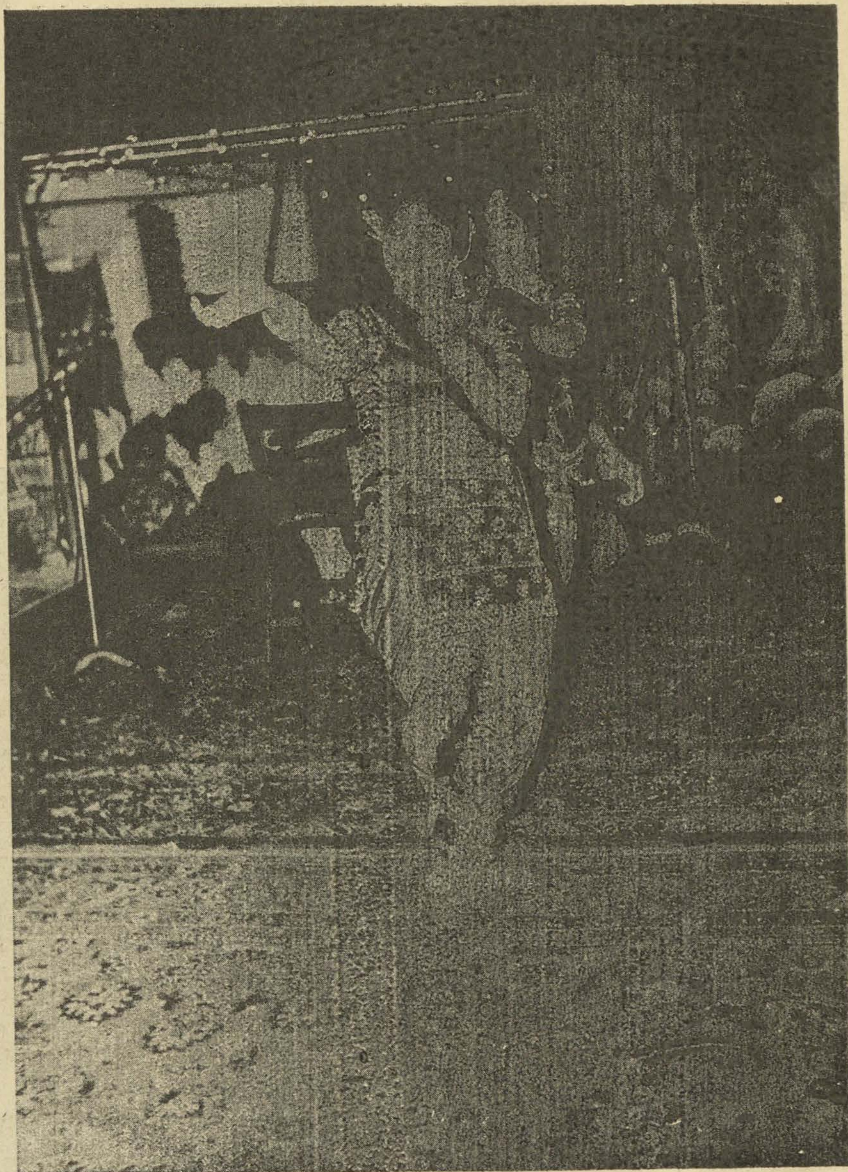
The club provides all the amenities, that any other first class club can boast of. It has a tastefully furnished lounge, record room, a table tennis room and a tennis court, which adds to its many attractions. Serveral important persons have since visited the Gymkhana and everybody had some soft words of

prays for the commendable work done for the social life of this historical town. The feeling of loneliness developed by the various officers vanished giving rise to better and fuller life Contact between the officers and public resulted in better understanding and harmonous relations which is all too good for progress and execution of development projects.

Since the construction of the building it has been the venue of maltifarious activities. A cultural show was organised for the construction of proposed T.B. Clinic and the show served two fold purpose *i.e.* a handsome



Maripuri Dance presented by the artists of Ghanshiam Troupe.



Parveen sisters presenting a dance.

amount was collected for the T.B. Clinic and it also provided an entertainment to the public of the town. Although the building was not at that time fully completed, furnished and decorated yet the zeal and enthusiasm of the officers enutrusted with this work made possible all the arrangements and made the function a great success.

At the instance of some senior officers of the District Headquarters the Lion's Club was also formed. A meeting was held at the residence of the

the then Superintendent of Police, Mr. Wajihul Hasan Zaidi for this purpose. Despite a rather high admission fee of Rs. 50/- no less than twenty members were enrolled. Mr. Shahjehan S. Karim was unanimously elected its president. Soon after the inauguration ceremony was perfomed by a very eminent lion from Bombay at the lawns of Mr. Zaidi's residence. This was a colourful and impressive ceremony. As agreed earlier every member was required to play as host to other members at his residence for the meeting of the Club, A number of projects were taken up by the members in subse-



Khamiso Khan supported by Mitha Khan playing Alghoza.

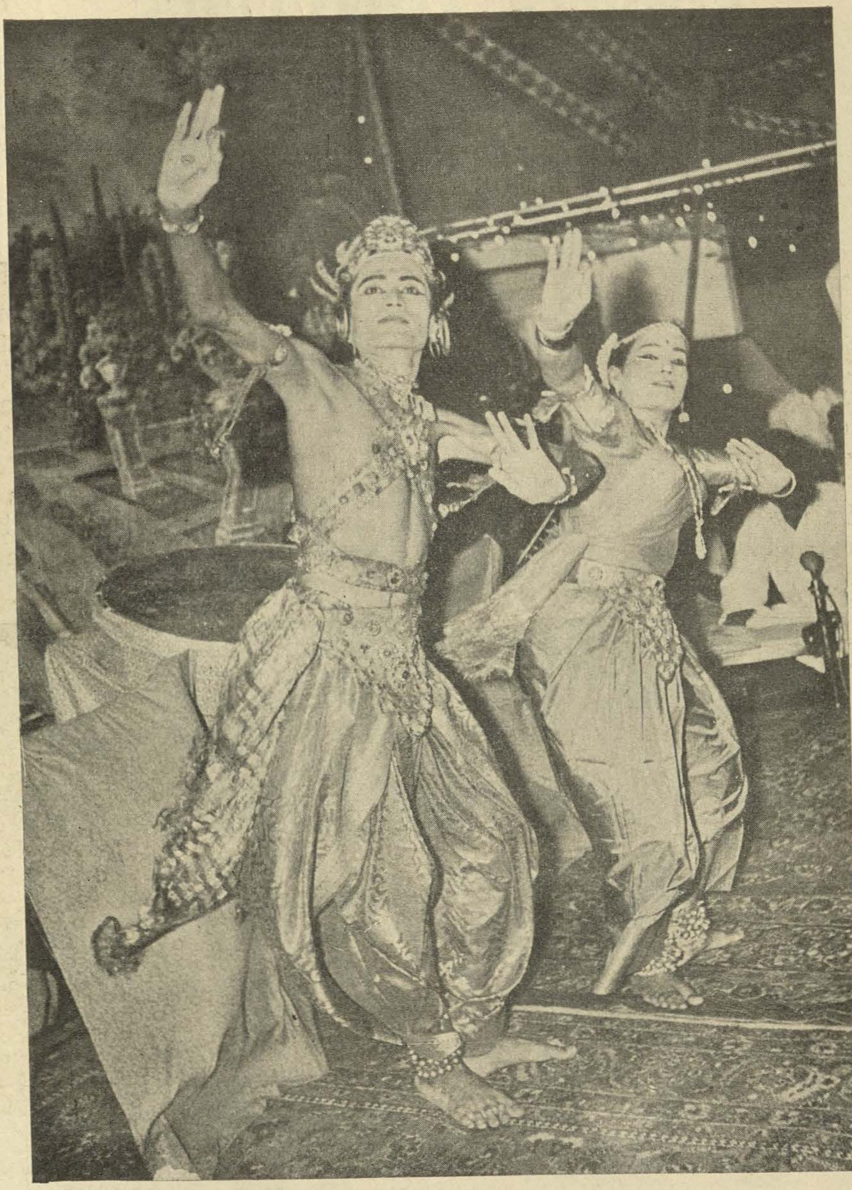
quent meetings. In each meeting, contributions were made for the medicines for the need patients, books for the poor students, cloths for the poor,



Artists of Ghanshiam Troupe presenting the favourite Sindhi Dance. "Ho-Jamalo".

building material like mats and bamboos for the shelterless persons and handsome amount to the cyclone victims of East Pakistan.

In the end we owe, a lot to our popular Deputy Commissioner, but for whose efforts this objective could not have been attained. As Shakespears said:



Mr. and Mrs. Ghanshiam performing a classical dance.

'His life is gentle and the elements to mixed in him, that the nature might stand up and say to all the world.........THIS IS A MAN.

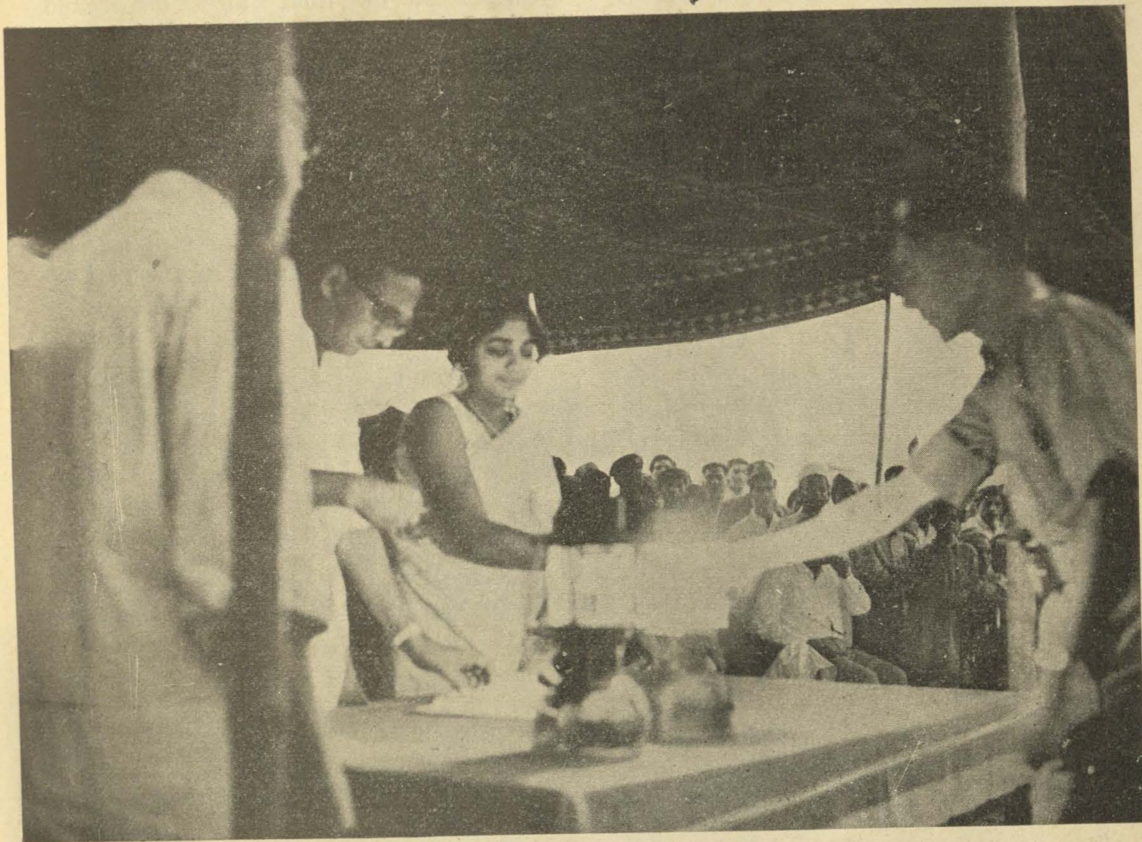
SPORTS ACTIVITIES

CH. MOBASHSHIR AHMAD,
Joint Secretary,
District Sports Association, Thatta

The quest for bread takes a heavy toll of our physical self which needs recreation to repair the wear and tear. It is, therefore, through games and sports that we seek to maintain a harmony between our mind and physical self. Thatta District enjoys the reputation of being one of the best bird shooting area of West Pakistan. The sports were however unknown in the District prior to December 1962. With the exception of a few volley ball matches the the other sports were neglected in the past. In order to promote sports activities the District Sports Association was formed in December 1962, with Deputy Commissioner as its Pre-



Begum Shama S. Karim addressing the audience on the occasion of the prize distribution ceremony on Pakistan Day.



Begum Shama S. Karim wife of the Deputy Commissioner distributing prizes to the participants of Hockey Match played on Pakistan Day.

sident. Soon after taking over the Presidentship of the Association, Mr. Shahjehan S. Karim, C.S.P. infused a new blood in the association. He took keen interest in the sports activities and an elaborate programe was chalked out for the development of Sports in the District. The following Sports Associations were immediately formed:—

1. District Hockey Association.
2. District Cricket Association.
3. District Volley Ball Association.
4. District Table Tennis Association.
5. District Football Association.
6. District Tennis Association.
7. District Athelets Association.
8. District Badminton Association.
9. District Body Building & Weightlifting Association.

Hockey. The District Hockey Association was the first to be formed. This was immediately affiliated with the Hyderabad Zone Hockey Association. Soon after its formation Thatta District was represented in the Inter District Hockey Tournament held at Hyderabad in March 63, for the first-time in its history by two teams.

The Association organized its first League Tournament in April 1963, which was won by Thatta P.W.D. while Government College, Thatta got the second position. Later on in May 1963 the Association organized the Arshad Ali Khan Memorial Tournament at Police Ground, Makli. The trophy for this tournament was donated by Mr. Basharat Ali Khan, S.D.O., Tail Sub-Division, and his brother in the memory of their younger brother late Flying Officer Arshad Ali Khan, who met his untimely death in an air erash in October, 1962. All the leading teams of Hyderabad Zone participated in the Tournament. The trophy was won by Thatta P.W.D. Mr. Abu Nassar, *S.Q.A.*, *C.S.P.* Commissioner Hyderabad Division witnessed the final and distributed the prizes. He promised all help for the construction of a Stadium at *Makli* in his presidential address. The most important feature of this Tournament was first defeat of the G. T. S. Hyderabad team within Hyderabad Zone since its formation. This redoubtable combination met its Waterloo at the hands of Hyderabad Wanderers in the Semi-Final of the Tournament.

Thatta District Hockey Association had another feather in its cap when Thatta Police were declared joint winners of Major Shakoor Cup Hockey Tournament, Hyderabad along along with Pak Capital, Karachi in July, 1963.

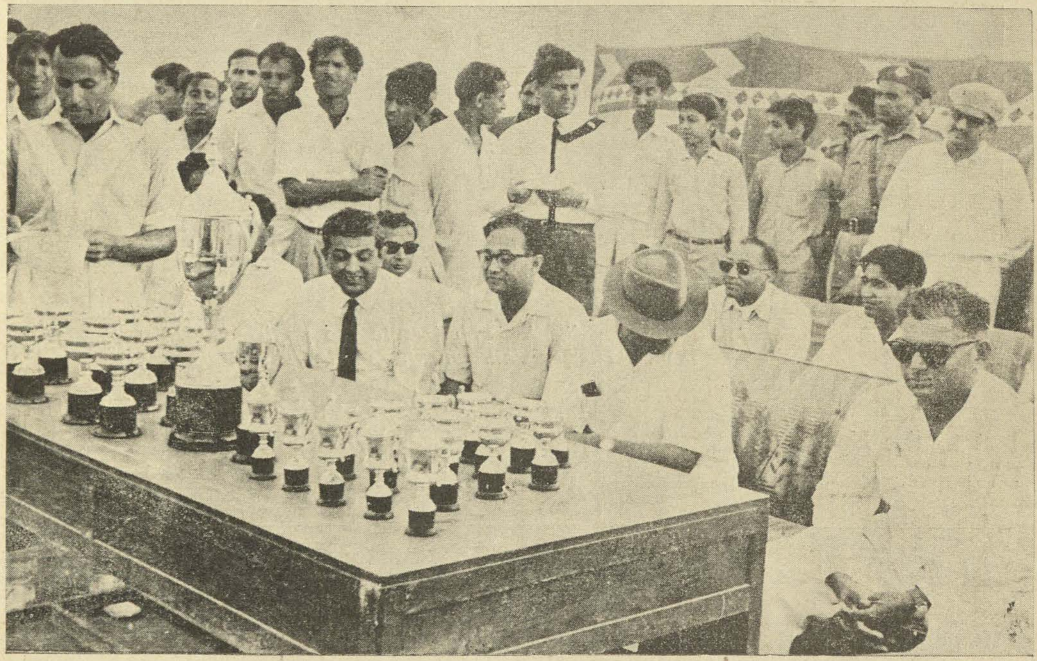


Members of the P.W.D. and Police Teams with Deputy Commissioner.

The Association arranged to get the Hyderabad Zone, Inter District Hockey Tournament allotted to Thatta District. It is the first occasion that a place other than Hyderabad was made the venue of this Tournament. The Tournament was held in April 1964. The selected teams from Hyderabad, Dadu, Tharparkar, Kotri and Sanghar participated in the Tournament. Two teams were entered by the District Hockey Association, Thatta. The Championship was won by Hyderabad 'A' while Tharparkar Eleven was the runners. Mr. S. M. Wasim, C.S.P., the then Commissioner, Hyderabad Division, presided over the function and distirbuted the prizes.

Besides the above tournament exhibition matches are frequently played between various local teams on the occasions of Pakistan Day, Independence Day and Revolution Day, etc.

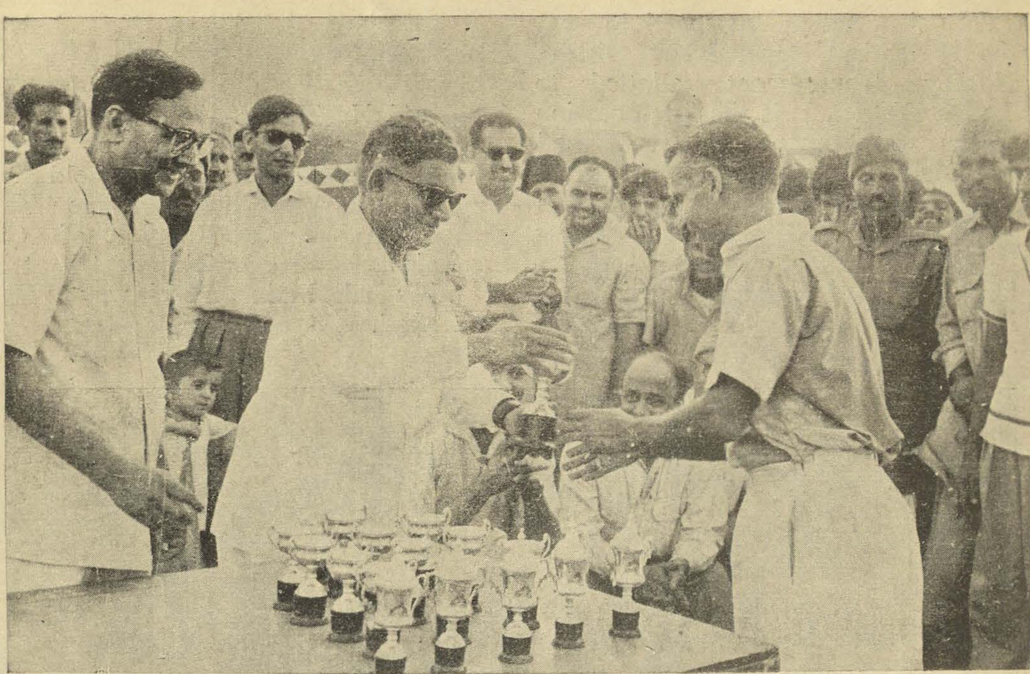
Table Tennis.—This game is more common among College Students. College Championship is held every year. A National Table Tennis Team from the Republic of China also played exhibition match at Darbar Hall, Makli on their way to Hyderabad.



Commissioner, Hyderabad Division with District Officers and Hockey Players on the occasion of Prize Distribution ceremony.

Volley Ball.—This game is very popular in the urban as well as rural Areas of the District. Volley Ball matches were held in the past quite frequently. The District Volley Ball Association organised tournaments as Sujawal and Thatta. The District Volley Ball Championship, held at Sujawal was won by P.W.D. Club Chuhar-jamali.

Badminton.—Thatta District were the runners in the first ever held Hyder-



Commissioner, Hyderabad Division distributing prizes to the participants Inter District Hockey Tournament.

abad Zone Inter District Badminton Championship at Hyderabad. They lost to the Hyderabad District in the final

Cricket.—Hyderabad Deputy Commissioner's Eleven played a friendly Cricket match against Thatta Deputy Commissioner's Eleven at Thatta.



Volley Ball Match being played on the occasion of Meher Shah Fair at Mirpur Bathoro.



Another view of Meher Shah Fair, Mirpur Bathoro.

The local team put up a grand show by playing a drawn game against one of the strongest teams of Hyderabad Zone.

Body Building and Weight Lifting.

District Body Building and Weight-lifting Association held its annual contest for Mr. THATTA and Mr. CLUB, which were won by Messrs Qaiser Wahab Khan and Hamraz Ahmed respectively.

The other Association have also chalked out their programmes to hold District Championship Tournaments of their respective games.

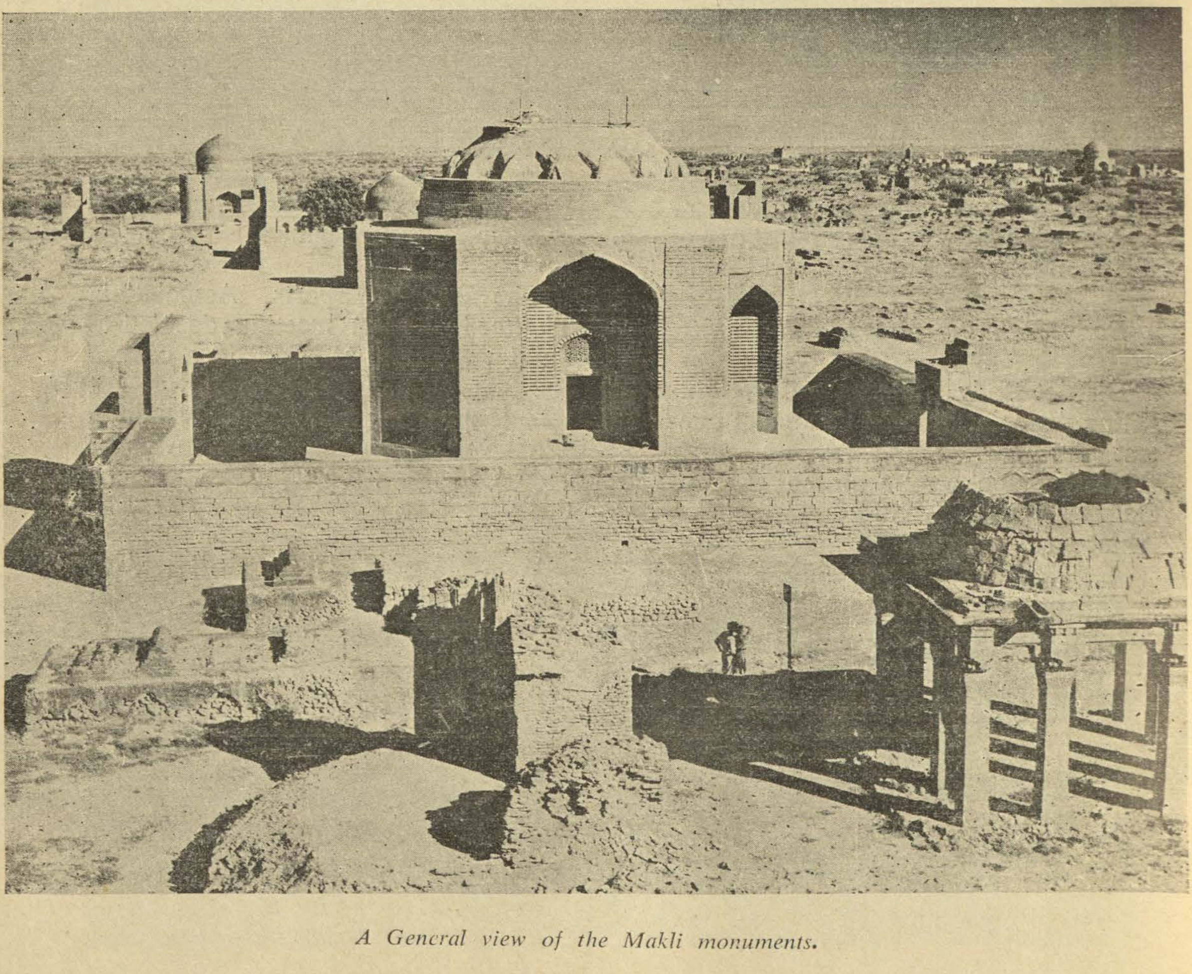
The District Sports Association, Thatta, in its last meeting decided to build a Stadium at Makli at a cost of Rs. 30,000/-. I am sure, it will not take long, when a beautiful stadium will be ready for the sports lovers of Thatta District, most probably before this year ends.

With a set of officers dedicated to sports, Thatta has a bright future in this aspect of social life.

TOURISM

(By the courtesy of the Bureau of Tourism, Government of Pakistan).

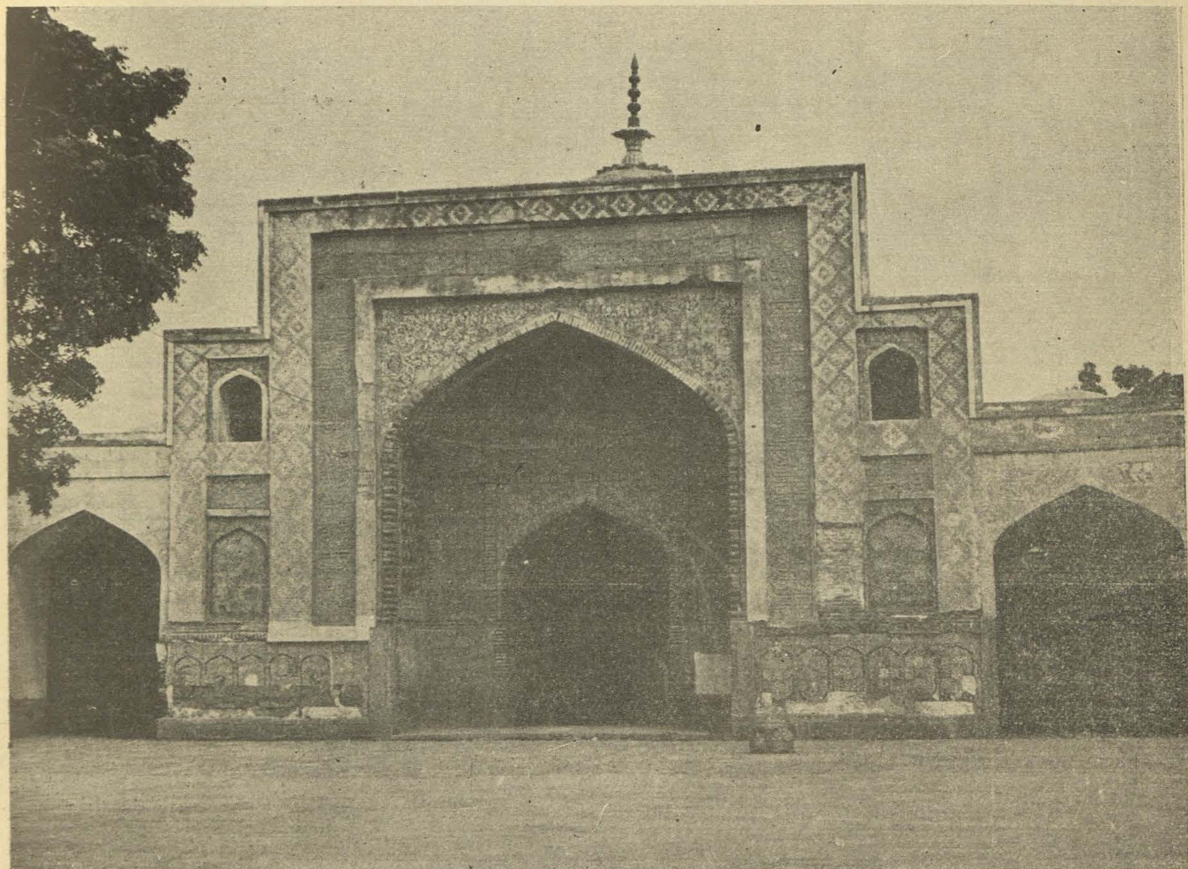
Introduction.—Thatta, the El Dorado of the Indus-Valley is situated 63 miles east of Karachi on the National Highway and 13 miles from Jungshahi Railway Station with which it is connected by metalled road. It is supposed to have been the Patala of Alexander the Great. It has also been identified with Debal, the great Hindu town which Arabs conquered first under the Young General Mohd-bin-Qasim.



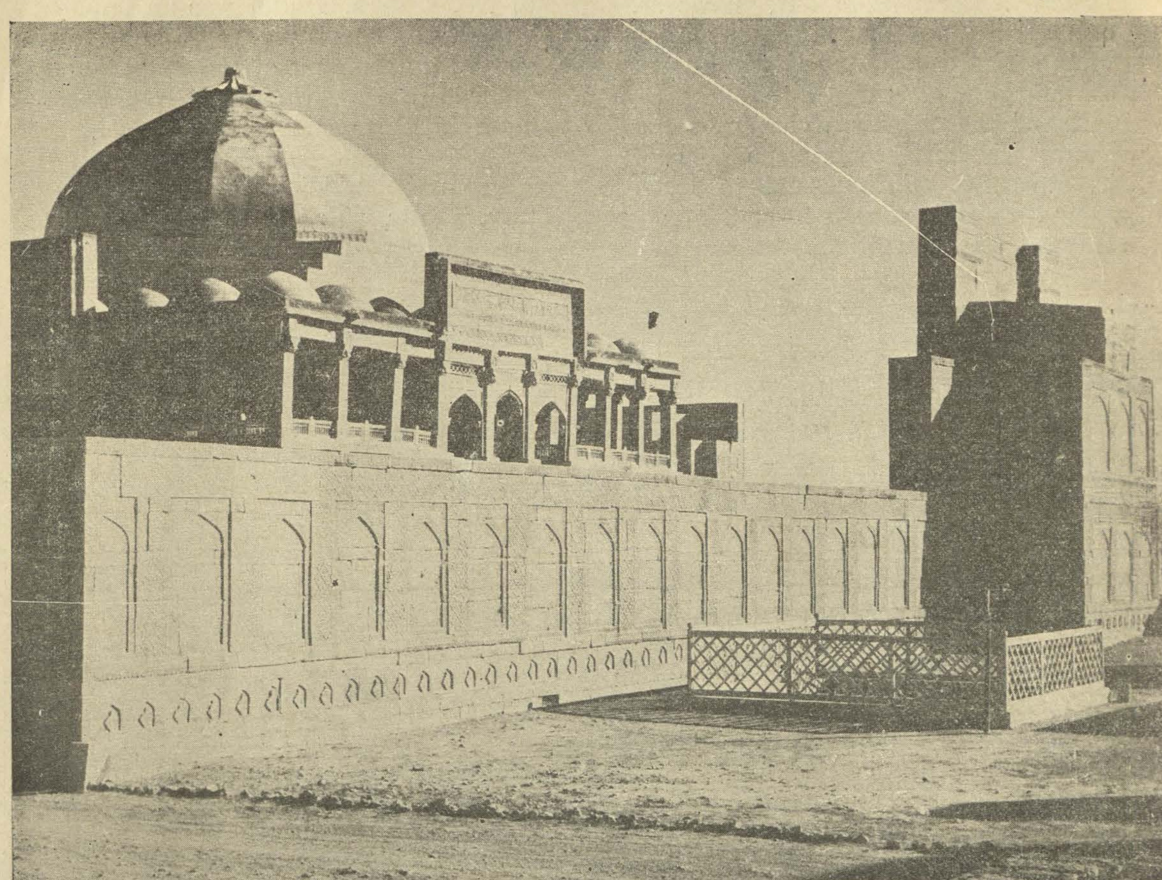
A General view of the Makli monuments.

Historical Background.—It, however. came into lime-light during the reign of Jam Nazimuddin, popularly known as Jam Nanda, one of the greatest rules of the Samma dynasty of the Lower Sind. It reached the fame of its prosperity during 1461 to 1509. After the death of Jam Nanda, Thatta changed hands with the Arghun and the Tarkhan rules who came from the North and whose remains are also extant along those of the Sammas. In 1556, Thatta was sacked by a Portugues fleet of 28 ships under Pedru Baretto Rolim. The Mughals succeeded the Tarkhans in 1592 and ruled the country through their governors till 1739. At the time of the invasion of Nadir Shah, Thatta was an important centre of learning, trade and industry with a number of universities and 40,000 weavers who made the finest cloth in all over the sub-continent.

From the middle of the 14th Century, Thatta with its necropolitan suburbs of Makli, two miles north-west, made rapid and remarkable strides in achieving and a stablizing greater political importance, economic prosperity and cultural refinement which earned for it the power and prosperity of capital town of Sind for four centuries. It attracted travellers and traders, and diplomates from different countries of Asia and Europe. Euro-



Eastern Mehrab of Shah Jehan Mosque.



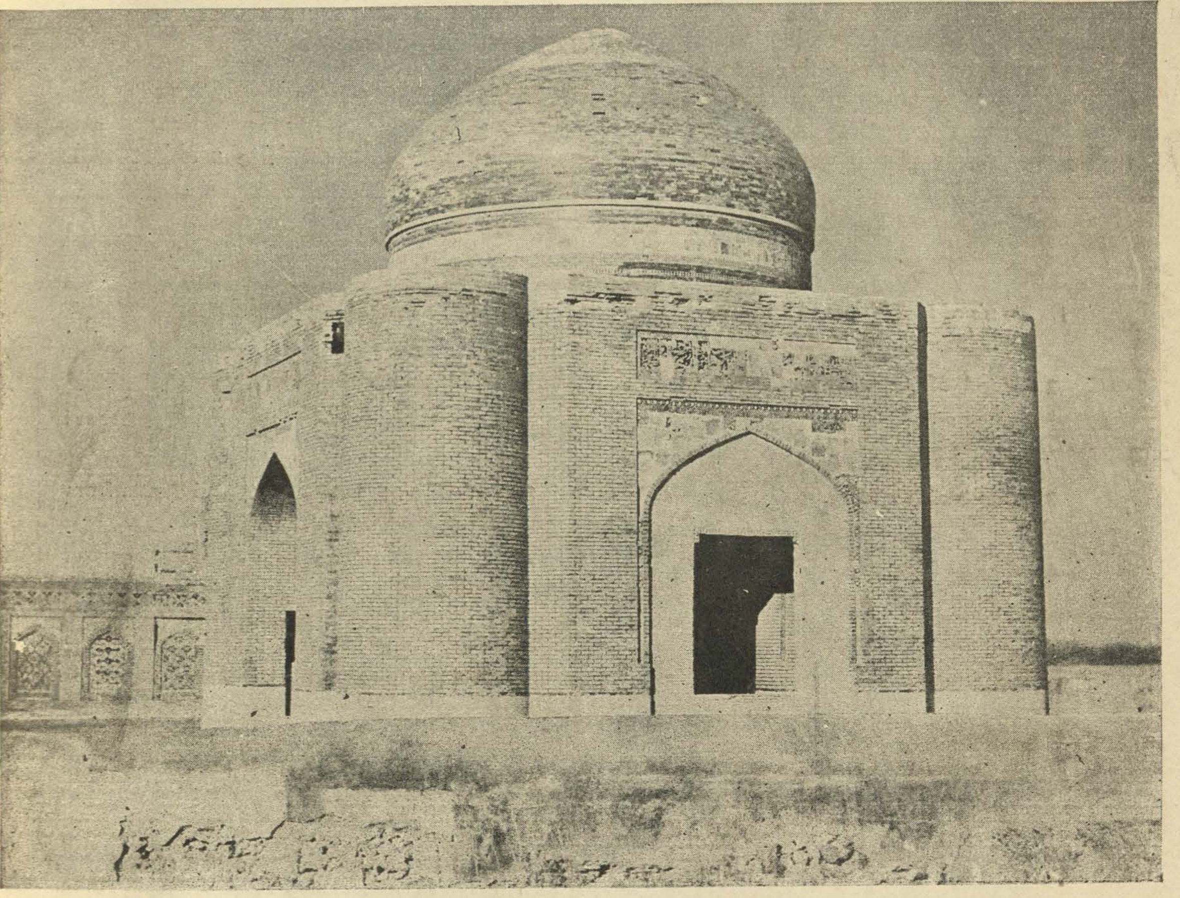
Tomb of Isa Khan Tarkhan.

pean traders for whom Thatta was practically synonymous with Sind, called it an "El Dorado" a "Utopia of wealth beyond avarice'. It was by all accounts 'one of the greatest cities of India'; its artisans 'the most industrious in Mughal Kingdom', its market, 'the most celebrated'. After the death of Nadir Shah, the Kalhoras, a new Sindhi dynasty, arose with their capital at Khudabad and Thatta was abandoned to decline.

Monuments.—The most remakable monument in Thatta is the Shahjehan mosque. It was begun in 1644 by the great Mughal emperor, Shahjehan and completed by his son and successor Aurangzeb. It is built in the form of a 'carvan seri', a great Court enclosed by a corridor of ninety domed compartments, exclusive of the mosque proper in the middle of the one side and its counterpart opposite. It measures 314 by 190 feet and covers 6,316 sqare yards of ground. The exterior of this Mosque is quite plain and white washed but the whole interior, from the ground level to the centre of the highest dome, is covered with the most amazing variety of beautiful patterns worked out in coloured tiles. Unlike the usual sand stone or marble buildings of Shahjehan's period at other places in the sub-continent, the great mosque at Thatta is executed according to the bricks and tiles tradition, and as such is unique in either, Pakistan or India.

Makli Hills.—The glory of Thatta, however, is not to be sought within the town, but on the Makli Hill, about two miles from the town on the main road to Karachi where one could see the impressive array of imposing remains of a variety of monumental buildings such as mosques and mausoleums, finials and facades designed in interesting architectural styles.

tric and floral patterns executed in glazed tiles. The coloured enamelled tiles have been lavishly used in the form of dados, panels and spandrels. The use of dark-red bricks alternating with enamelled faced bricks with imitation joints of white enamelled bands moulded upon their edges and the tiles, in two colours, white and



Tomb of Diwan Shurfa Khan.

Architectural Beauty.—These ancient buildings have a character of their own and depict a typical provincial school of craftsmanship with a slight touch of tastes in vogue in countries accross the borders of Sind, East and West. A good number of buildings are surfaced with ornamental schemes of diverse geome-

blue varying in the hue from dark purplish to a light greenish blue set in places in mosaic technique, go a long way in making the place extremely attractive. Thatta tiles are distinctively original and differ from the tile-work of Multan, Lahore, Delhi and Bedar in their patterns,

L (iv) 432—20

designs, texture and colour schemes. They, hower, depict the great influence of the traditions surviving in Persian from the ancient civilization of Babylon and Nineveh.

Necroplis.—This vast necroplis of Makli, covering an area of six square miles, contans more than one million graves. A dozen canopies built in yellow sand-stone are famous for their carvings-generally in the style of Akbar's Fatehpur Sikri. These carvings for their fineness have been called "Lace-work in stone" and at places the decoration is so profuse that it seems as if tile work has been rendered in stone and the painter's brush has been coverted into the artist's chiesel.

Inscriptions.—Added interest of the majority of these monumental remains lie in the unusual wealth and veriety of their Persian and Arabic verses and epitaphs of striking merit and illuminating biographical value inscribed in superb style of muslim calligraphy and executed in subtle, baffling and intricate pattern.

Tombs.—Among the innumberable graves and tombs at Makli Hill, the following are very prominent on account of their exuisite architectural beauty:—

1. Tomb of Jam Nizamuddin (Jam Nando)	Most distinguished ruler of Summa Dynasty. He ruled over Thatta from 1460. A.D. to 1508 A.D.
2. Tomb of Mirza Isa Turkhan	First Turkhan Ruler. He ruled over Thatta from 1554 A.D. to 1572 A.D. The tomb was built in 1573 and is situated towards the east of Syed Abdul llah Shah's Shrine.
3. Tomb of Baqi Beg.	Son of Mirza Essa Khan. Ruled Thatta from 1572 A.D. to 1585 A.D.
4. Tomb of Jani Beg.	Grand son of Mirza Baqi Beg. Ruled over Thatta from 1585 to 1592 and was reduced to the position of Governor of Thatta in 1592 A.D. by Mughal Emperor and died in 1599 A.D.
5. Tomb of Mirza Ghazi Beg.	Suceeded his father Mirza Jani Beg as Governor of Thatta appointed by Emperor Akbar. Assissinated in 1610. A.D.
6. Tomb of Nawab Shurfa Khan.	Sent as Governor by Emperor Jehangir directly from Delhi in 1624 but was soon relieved by Nawab Mirza Issa.
7. Tomb of Nawab Mirza Issa Khan.	Grand son of Mirza Issa Turkhan (founder of Turkhan Dynasty) succeeded Nawab Shurfa Khan in 1627 and died in 1644. (The most famous and best preserved among the Makli Mausoleum whose picture appears on the back of Ten Rupee Note).

In addition to the above listed prominent monuments there are innumberable other his historical remains, providing wide scope for toursim at Thattta.

Transport.—Thatta lies at a distance of 63 miles on the National High-way from Karachi to Lahore and is assessible by Taxis which are available at

Karachi. Government transport also operates on the route each way daily Thatta is also connected with Karachi by rail via Jungshahi railway station.

It lies at a distance of 13 miles and Thatta connecting all trains stopping at this station.

Accommodation:-

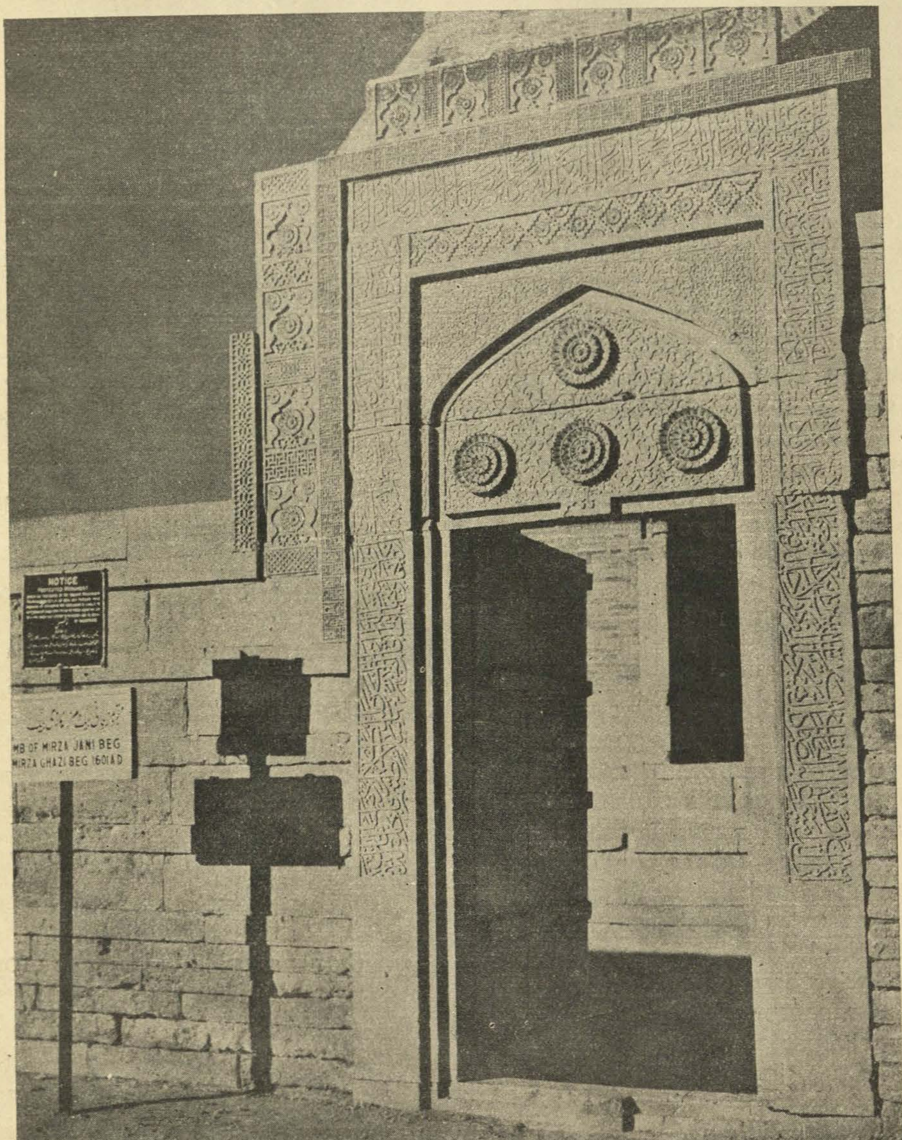
1. Inspection Bungalow
7. P.W.D. Bungalow
3. Archaelogical Department Rest House.

Authority for Reservation

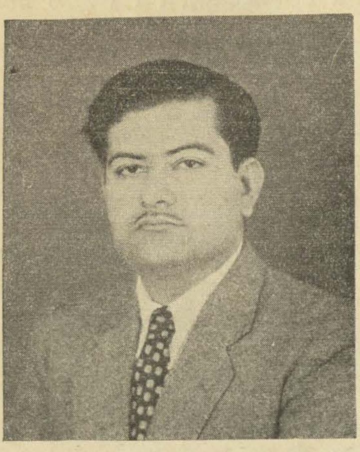
The Deputy Commissioner, Thatta

The Executive Engineer, Road Division, Thatta

The Director of Archeology, Block No. 64 Pak Secretariat, Shahra-i-Iraq Karachi.



Tomb of Jani Beg Ghazi Beg,



WATERLOGGING AND SALINITY

G. H. BUGHI,

Executive Engineer, Drainage Division, Thatta.

Man, ever since the birth of his species has been engaged in the struggle for *Food*. Development of human society has always centred round this struggle to feed more and more mouths Agricultural land is the only source of fulfilment of this basic need of all human beings. More and more areas of land are, therefore, brought under plough to keep pace with the rate of increase of population, though recently, desperate efforts are also being put in to check the birth rate which has assumed alarming stage in Pakistan. In order to get more food from the land agricultural and irrigation methods have been renovated from generation to generation. No doubt, an extension of agiricultural lands will produce food and may meet our demand but the economics of produce from the land should be in keeping with the expenditure involved and in order to get more benefits from the land, it will be profitable always to strive hard to get more yield per acre at a comparatively low cost. Unfortunately per acre yield in Pakistan is one of the lowest in the World. In Egypt, where the conditions of climate and water supply are practically the same as those obtained in West Pakistan, per acre yield of rice is three times more and of wheat and cotton duble than that we get in West Pakistan. The yield can be increased by reclaiming the lands of the old irrigated areas, productivity of which has either completely or partially died down due to salinity and waterlogging.

The problems of water logging and Salinity are interlinked with each other. An agricultural land is said to be water logged when its productivity or fertility is affected by high subsoil water-table. The productivity of the land gets affected when the root zone of the plants get flooded with water and there is no room for their aeration. The main causes of water-logging are:—

(i) Over-irrigation *i.e.*, irrigating more land with more water than specified in the cropping pattern of the tract.

(ii) Seepage of water through bed and sides of adjoining canals.

(iii) Inadequate drainage facilities to the land.

(iv) Soils having no good natural drainage qualities.

It has been reduced from experience that most fertile lands with perfect irrigation set-up have been rendered barren in the absence of adequate arrangements of Drainage.

The ultimate purpose of artificial drainage is to increase the productivity of agricultural soils by removing the free water which is injurious to the plant growth. The ordinary crops will not grow in a salinated soil, nor will they thrive in any soil in which more than 60% voids are filled with water.

In rolling countries, the surface slopes of land are sufficient to shed off the excess precipitation of water to numerous swamps or depressions from where it is carried away by natural gravity to the nearby creeks or rivers thereby keeping the Sub-soil water table well below the danger point. Over flat areas like that of Lower Indus Basin, no such natural drainage exists and excess water salinates the soil and even collects in the shallow depressions on the surface until it either evaporates or moves slowly through the sub-soil to distant streams. It is over such areas where artificial drainage is needed.

Thatta District is a recent deltaic formation of the river Indus from which sea has receded recently. Average slope of ground is about 1 in 9000 ft. Most of the soil particularly that very near the sea has a large percentage of salt contents and is mainly of sandy loam characteristics.

Prior to the construction of Ghulam Muhammad Barrage, irrigation for agriculture was practised by means of Inundation Canals which flowed for one season that of kharif and canals usually did not flow for more than 100 days per year. Moreover the quantum of water also fluctuated with the flood levels obtained in River Indus. As the lands remained dry for nearly 7 months in a year, necessity for artificial drainage was never felt. A few natural "*dhoros*" which were also the dead course of river efficiently drained off the surplus water during the monsoon. The sub-soil water level in the tract. therefore, remained within 20 to 30 feet below the general ground level. In the post-barrage conditions, nearly the whole Thatta District will get assured supply of irrigation water through Barrage Canals. As the quantum of water thus supplied will be very much on the higher side, there will be an immediate rise in the sub-soil water table with the result that huge areas will be thrown out of cultivation due to waterlogging. To avoid these disasterous results, it is necessary to have a complete system of *DRAINAGE.*

Keeping this end in view, an scheme costing Rs. 16.05 crores has been formulated for construction of net work of surface drains in the whole Ghulam Muhammad Barrage Project area, by which Thatta District will be most benefitted.

According to this scheme of surface drains 1902 miles of open drains will be excavated and the ultimate aim of these drains will be to throw out the surplus water in the sea either by gravity or through pumping machines. This scheme of drainage in Ghulam Muhammad Barrage Project is given *High Priority* amongst other irrigation projects because the personalities at the helm of affairs are well aware of the fact that the menace of waterlogging and salinity has already taken a heavy toll of millions of acres of

L (iv) 432—21

most fertile land in the old and more established irrigation systems of West Pakistan.

The drainage works in this region are proposed to be implemented in 2 phases. Phase No. 1 is for surface Drainage to take care of surplus irrigation water and rain water Phase No. II is for drainage of under ground water-phase No. I will give interim relief to the worst affected areas.

M/s Huntings Technical Services Ltd; have been engaged by WAPDA to carry out detailed investigation in the area and render their expert advice on the drainage scheme of the tract. Before I close this article I would like to mention some of the outstanding benefits of land drainage.

Benefits of Drainage.

Adequate drainage improves soil structure and increases and perpetuates the productivity of soils. Drainge is the first essential in reclamation of waterlogged saline or alkaline soils. Even if only those lands which have been farmed recently, drainage benefits irrigation, agriculture and the public in many ways for example adequate drainage:—

(1) Facilituates early ploughing and planting.

(2) Lengthening crop growing season.

(3) Provides more available soil and plant food by increasing depth of root zone soil.

(4) Helps in soil ventilation.

(5) Decreases soil erosion and gullying by increasing water infiltration into the soils.

(6) Favours growth of soil becteria.

(7) Leaches excess salt from salts.

(8) Assurs higher soil temperature.

(9) Improves sanitary and health conditions and makes rural life more attractive.

APPENDICES

APPENDIX I

COMPREHENSIVE LIST OF DEVELOPMENT SCHEMES UNDER RURAL WORKS PROGRAMME OF PL-480 FOR 1963-64 UNDER IMPLEMENTATION IN THATTA DISTRICT

Sl. No	Name of the Union Council	Name of the scheme	Total estimated cost. Rupees	Cost to be met from PL 480 funds	CONTRIBUTION FROM District Council Rupees	Union Council Rupees	
1	2	3	4	5	6	7	8
		(THATTA SUBDIVISION)					
1.	Mirpur Sakro.	Pavement of streets and construction of Drains at Mirpursakro.	20,000.00	20,000.00	..	..	..
2.	Do.	Sinking of well at village Haji Ali Muhammad Shoro.	5,000.00	5,000.00	..	..	..
3.	Do.	Sinking of Well at village Saleh Muhammad Shoro.	5,000.00	5,000.00	..	..	..
4.	Do.	Sinking of Well at village Haji Ali Muhammad Chano.	5,000.00	5,000.00	..	..	..
5.	Gharo.	Sinking of Well at village Kadir Bux Baloch.	8,000.00	8,000.00	..	..	..
6.	Do.	Sinking of Well at village Pirdino Shah.	8,000.00	8,000.00	..	..	..
7.	Do.	Sinking of Well at village Jaffar Jokhio.	8,000.00	8,000.00	..	..	..
8.	Do.	Sinking of Well at village Ishaq Jokhio.	8,000.00	8,000.00	..	..	..
9.	Do.	Sinking of Well at village Rahim Khan Baloch.	8,000.00	8,000.00	..	..	..
10.	Do.	Sinking of Well at village Ramzan Katiar.	8,000.00	8,000.00	..	..	..
11.	Do.	Sinking of Well at village Mehrab Khan Baloch.	8,000.00	8,000.00	..	..	..
12.	Do.	Construction of Shopping Centre at Gharo.	1,00,000.00	50,000.00	25,000.00	25,000.00	..

13.	Gharo.	.. Sinking of one more pacca well in deh Patho of Gharo Union Council.	8,000.00	8,000.00	..	..	..
14.	Ghulam Ullah	.. Construction of Union Ghar at Ghulmullah.	10,000.00	5,000.00	..	5,000.00	..
15.	Do.	.. Construction of Maternity Home at Ghulamullah.	10,000.00	5,000.00	..	5,000.00	..
16.	Buhara	.. Construction of Union Ghar at Buhara.	10,000.00	5,000.00	..	5,000.00	..
17.	Karampur	.. Construction of Uhion Ghar at Karampur.	10,000.00	5,000.00	..	5,000.00	..
18.	Do.	.. Construction f Primary School at Karampur.	6,700.00	3,350.00	..	..	(Rs. 3,350/- Govt. grant already sanction in 1962-63.
	TOTAL OF TALUKA MIRPUR SAKRO	.. Rs.	2,45,700.00	1,72,350.00	25,000.00	45,000.00	3,350.00
	TALUKA THATTA.						
19.	Jhimpir	.. Construction of Canal for irrigation and drinking purposes from Darwat to Jaghri.	20,000.00	20,000.00	..	..	..
20.	Do.	.. Construction of three Water Tanks within the Union Council.	30,000.00	30,000.00	..	..	..
21.	Do.	.. Construction of one more water tank in Union Council Jhimpir.	8,000.00	8,000.00	..	..	..
22.	Bijora	.. Installation of Hand Pumps at Baghar Mori & Mirankot.	800.00	800.00	..	..	..

COMPREHENSIVE LIST OF DEVELOPMENT SCHEMES UNDER RURAL WORKS PROGRAME OF PL-480 FOR THE YEAR 1963-64 UNDER IMPLEMENTATION IN THATTA DISTRICT

Sl. No	Name of the Union Council	Name of the scheme	Total estimated cost	Cost to be met from PL 480 funds	CONTRIBUTION FROM District Council	CONTRIBUTION FROM Union Council	
			Rupees		Rupees	Rupees	
1	2	3	4	5	6	7	8
23.	Bijora	.. Installation of Hand Pumps at village Pijogoth.	400.00	400.00	—	..	..
24.	Do.	.. Construction of Union Ghar at Baghar Mori.	10,000.00	5,000.00	..	5,000.00	..
25.	Do.	.. Construction of Ladies Industrial Home-cum-Community Centre at Makli.	45,000.00	45,000.00	—	—	—
26.	Do.	.. Construction of T.B. Clinic at Makli.	1,00,000.00	50,000.00	10,000.00	..	40,000/- Public fund
27.	Chllya	.. Construction of Union Ghar at village Chatochand.	10,000.00	5,000.00	..	5,000.00	..
28.	Jherruck	.. Construction of Water Tank at village Thiriri.	10,000.00	10,000.000	..	—	—
29.	Do.	.. Sinking of Well at village Tando Hafiz Shah.	8,000.00	8,000.00	—	—	..
30.	Do.	.. Sinking of well at village Shaeikhani.	8,000.00	8,000.00	..	..	..
31.	Do.	.. Sinking of well at village Lakhi	8,000.00	8,000.00	..	..	..
32.	Sonda	.. Construction of Sub-Health Centre at Sonda.	10,000.00	10,000.00	..	—	..

33.	Kalri	.. Construction of Union Ghar at village Gul Mando.	10,000.00	5,000.00	..	5,000.00	..	..
34.	Do.	.. Construction of culvert over Jam Wah.	7,000.00	7,000.00	..	..	..	..
35.	Jung Shahi	.. Sinking of well at village Ramzan Hejib.	8,000.00	8,000.00	..	..	..	..
36.	Do.	.. Sinking of well at village Sadhoro Makan.	8,000.00	8,000.00	..	..	..	..
37.	Do.	.. Sinking of well at village Gul Muhammed Jokhio.	8,000.00	8,000.00	..	..	..	..
38.	Do.	.. Sinking of well at village Malmari.	8,000.00	8,000.00	..	..	..	..
39.	Do.	.. Test boring for water supply at Jungshahi.	5,000.00	5,000.00	..	..	..	..
		TOTAL OF TALUKA THATTA Rs. ..	3,22,200.00	2,57,200.00	10,000.00	15,000.00	40,000.00	
		TALUKA GHORABARI.						
40.	Garho	.. Installation of Hand Pump at village Issa Jat.	600.00	600.00	..	..	..	..
41.	Do.	.. Construction of Union Ghar at village Udasi.	10,000.00	5,000.00	..	5,000.00	..	..
42.	Do.	.. Construction of road from Ahmed Khan Jalbani to Udasi.	5,000.00	5,000.00	..	..	..	..
43.	Pir Patho	.. Installation of Hand pump at village Sujawal Kechi.	600.00	600.00	..	..	..	..
44.	Do.	.. Installation of Hard pump at village Vidh.	600.00	600.00	..	..	..	..
45.	Do.	.. Installation of Hand pump at village Larho.	600.00	600.00	..	..	..	..
46.	Do.	.. Installation of Hand pump at village Issa Khushk.	600.00	600.00	..	..	..	..
47.	Do.	.. Construction of Union Ghar at Pirpatho.	10,000.00	5,000.00	..	5,000.00	..	..

COMPREHENSIVE LIST OF DEVELOPMENT SCHEMES UNDER RURAL WORKS PROGRAMME OF PL-480 FOR THE YEAR 1963-64 UNDER IMPLEMENTATION IN THATTA DISTRICT

Sl. No	Name of the Union Council	Name of the scheme	Total estimated cost	Cost to be met from PL 480 funds	CONTRIBUTION FROM			
			Rupees		District Council	Union Council		
					Rupees	Rupees		
1	2	3	4	5	6	7		8
48.	Pir patho ..	Construction of market at Var	10,000.00	5,000.00	..	5,000.00	..	..
49.	Kotri Allah Rakhio Shah.	Construction of Union Ghar at village Mehar.	10,000.00	5,000.00	..	5,000.00	..	..
50.	Do. ..	Construction of Sub-Health Centre at Kotri A.R. Shah.	12,000.00	7,000.00	5,000.00	(already sanctioned).	..	..
51.	Baghar Mahal Keti Bunder.	Construction of Union Ghar at Baghan.	10,000.00	5,000.00		5,000.00	..	..
52.	Mahal Ketibunder	Construction of water tank at Ketibunder.	48,000.00	48,000.00	..	..	..	..
53.	Do. ..	Installation of six Hand pump within the Union Council Ketibunder.	2,400.00	2,400.00	..	..	..	..
	TOTAL OF TALUKA GHORABARI Rs. ..		1,20,400.00	90,400.00	5,000.00	25,000.00	..	..

TALUKA SUJAWAL. SHAHBUNDER SUBDIVISION

Sl. No	Name of the Union Council	Name of the scheme	Total estimated cost	Cost to be met from PL 480 funds	District Council	Union Council		
54.	Town Committee Sujawal.	Construction of Ladies Industrial Home-cum-Community Centre at Sujawal.	30,000.00	30,000.00	..	..	..	..
55.	Do. ..	Construction of Urdu Middle School at Sujawal.	30,000.00	30,000.00	..	..	..	..

56.	Do.	.. Low cost housing for labourers and other low income groups.	48,000.00	48,000.00	..	..	..	
57.	Mirzo Laghari	.. Installation of four Hand pumps in the Union Council.	2,000.00	2,000.00	..	..	..	
58.	Do.	.. Construction of water tank at village Nodo Baran.	10,000.00	7,500.00	..	2,500.00	..	
59.	Belo	.. Construction of Middle School for Boys at Belo.	30,000.00	30,000.00	..	..	..	
60.	Belo	.. Construction of Union Ghar at Belo.	10,000.00	5,000.00	..	5,000.00	..	
61.	Belo	.. Construction of water Tank at Belo	10,000.00	7,500.00	..	2,500.00	..	
62.	Ali Bahar	.. Construction of Middle School at Saeedpur.	30,000.00	30,000.00	..	..	..	
63.	Budho Talpur	.. Construction of Union Ghar at village Jar.	10,000.00	(5,000.00	..	5,000.00	..	
64.	Do.	.. Construction of Dispensary building at village Ghel.	10,000.00	5,000.00	..	5,000.00	..	
65.	Bijora	.. Installation of ten Hand pumps in U. C. Bijora.	5,000.00	5,000.00	..	..	..	
	TOTAL OF TALUKA SUJAWAL	Rs. ..	2,25,000.00	2,05,000.00	..	20,000.00	..	

TALUKA MIRPUR BATHORO.

66.	Town Committee Mirpurbathoro.	Construction of Shopping Centre at Mirpurbathoro.	50,000.00	25,000.00	..	25,000.00	..	
67.	Do.	.. Construction of Maternity Home at Mirpurbathoro.	32,000.00	15,000.00	10,000.00	5,000.00	2,000.00	Red Cross.
68.	Laikpur	.. Construction of Union Ghar at Laikpur.	10,000.00	5,000.00	..	5,000.00	..	
69.	Laikpur	.. Installation of eight Hand Pumps in Union Council Laikpur.	4,000.00	4,000.00	..	..	..	
70.	Darya Khan Suho	.. Construction of Union Ghar at Dary Khan Suho.	10,000.00	5,000.00	..	5,000.00	..	

COMPREHENSIVE LIST OF DEVELOPMENT SCHEMES UNDER RURAL WORKS PROGRAME OF PL-480 FOR THE YEAR 1963-64 UNDER IMPLEMENTATION IN THATTA DISTRICT

Sl. No	Name of the Union Council	Name of the scheme	Total estimated cost	Cost to be met from PL 480 funds	CONTRIBUTION FROM District Council	Union Council	
			Rupees		Rupees	Rupees	
1	2	3	4	5	6	7	8
TALUKA MIRPUR SAKRO							
71.	Darro	.. Pavment of streets and construction of Drains at Darro.	20,000.00	20,000.00	..	..	..
72.	Darro	.. Construction of Union Ghar at Darro.	10,000.00	5,000.00	..	5,000.00	..
73.	Darro	.. Installation of twenty Hand Pumps in Union Council Darro.	10,000.00	5,000.00	..	5,000.00	..
74.	Darro	.. Construction of Middle School with Arabic Section at Darro.	30,000.00	30,000.00	..	..	..
75.	Bano	.. Construction of Sub-Health Centre at Bano.	15,000.00	15,000.00	..	..	..
76.	Bano	.. Installation of twelve Hand Pumps at Bano/Jhoke and Dalidal.	6,000.00	6,000.00	..	..	..
77.	Bano/Darro	.. Construction of road from Bano to Darro.	25,000.00	25,000.00	..	..	..
78.	Bano	.. Installation of ten Hand Pumps in Union Council Bano.	5,000.00	2,500.00	..	2,500.00	..
79.	Bano	.. Construction of road from Bano to Jhoke *via* Abral.	20,000.00	20,000.00	..	..	..
80.	Mher Shah	.. Installation of eight Hand Pumps in Union Council Mehershah.	4,000.00	4,000.00	..	..	..
TOTAL OF TALUKA MIRPURBATHORO		..	2,51,000.00	1,86,500.00	10,000.00	52,500.00	2,000.00 Red Cross fund

TALUKA JATI.

81.	Tarkhoja	Construction of Middle School at village Tarkhoja.	30,000.00	30,000.00	..	..	..
82.	Do.	Construction of Union Ghar at village Murid Khoso.	10,000.00	5,000.00	..	5,000.00	
83.	Jati	Payement of streets and construction of Drains in Jati Town.	20,000.00	20,000.00	..	..	..
84.	Jati	Construction of Hostel for High School at Jati.	30,000.00	30,000.00	..	..	..
85.	Gul Muhammad Baran.	Construction of Union Ghar at village Gul Muhammad Baran.	10,000.00	5,000.00	..	5,000.00	..
86.	Do.	Construction of two water tanks in deh Chandan and Girhori.	6,000.00	6,000.00	..	..	..
87.	Do.	Construction of four water tanks (Troughs) for animals in U. C. Gul Muhammad Baran.	6,000.00	6,000.00	..	..	..
88.	Do.	Installation of one Hand Pump in Union Council Gul Muhammad Baran.	500.00	500.00	..	..	..
	TOTAL OF TALUKA JATI	Rs.	1,12,500.00	1,02,500.00	..	10,000.00	..

TALUKA SHAHBUNDER.

89.	Chuhar Jamali	Installation of six Hand Pumps in Union Council Chuharjamali.	3,000.00	3,000.00	..	..	..
90.	Ladiun	Construction of Union Ghar and Musafirkhana at Ladiun.	15,000.00	15,000.00	..	..	..

COMPREHENSIVE LIST OF DEVELOPMENT SCHEMES UNDER RURAL WORKS PROGRAME OF PL-480 FOR THE YEAR 1963-64 UNDER IMPLEMENTATION IN THATTA DISTRICT

Sl. No	Name of the Union Council	Name of the scheme	Total estimated cost Rupees	Cost to be met from PL 480 funds	CONTRIBUTION FROM District Council Rupees	Union Council Rupees	
1	2	3	4	5	6	7	8
91.	Ladiun ..	Installation of six Hand Pumps in the Union Council.	3,000.00	3,000.00	..	..	..
92.	Ladiun ..	Sinking of well at village Ghulam Muhammad Shah.	3,000.00	3,000.00	..	..	..
93.	Gungani ..	Installation of two Hand Pumps in Union Council Gungani.	1,000.00	1,000.00	..	..	..
94.	Kharochan and Sajanwari (Mahal Kharochan). ..	Construction of road from Kharochan to Sajanwari.	7,000.00	7,000.00	..	..	..
95.	Do. ..	Installation of six Hand Pumps in the Union Council.	4,000.00	4,000.00	..	..	..
	TOTAL OF TALUKA SHAHBUNDER Rs. ..		36,000.00	36,000.00	..	..	..

Progress report of District Council Schemes being implemented from District Council Funds allotted as 25% share of Rural Works Programme allocation 1963-64. All these schemes are in progress.

Name of the Scheme.	Cost of the Project.
TALUKA THATTA	Rs.
1. Construction of Kinder Garten School for Boys and Girls at Makli.	45,000.00
2. Construction of staff quarters for K.G. School at Makli. ..	25,000.00
3. Construction of High School at Jungshahi. ..	50,000.00
4. Construction of Maternity Home at Thatta. ..	30,000.00
5. Construction of Makli Idgah Road. ..	15,000.00
6. Construction of staff quarters for Medical Officer at Hellaya.	10,000.00
7. Construction of a Serai attached to the Civil Hospital Thatta.	10,000.00
Rs. ..	1,85,000.00
TALUKA GHORABARI.	
8. Construction of staff quarters for Medical Officer at Var ..	10,000.00
TALUKA MIRPURSAKRO	
9. Construction of staff quarters for Medical Officer at Ghulamullah.	10,000.00
TALUKA SUJAWAL.	
10. Construction of approach road from Ferry-Sujawal road to High School at Sujawal.	10,000.00
TALUKA JATI.	
11. Construction of High School at Jati ..	50,000.00
THATTA DISTRICT.	
12. Seven Scholarships to Science students in Government College, Thatta at Rs. 30 per student for academic year 1963-64.	2,520.00
Total .. Rs. ..	2,67,520.00

I. TOTAL ALLOCATION. 14,90,000

1. Expenditure to be incurred on establishment and cont Mingencis and for purchse of stationery etc. 90,000.00

2. District Council share at 25% for specific District Council Schem .. 3,50,000.00

3. Net amount available for development work under PL-480 foe scheme to be executed by Town Committees;Union Councils. 10,50,000.00

II. 1. Twelve District Council Scheme out of its share of Rs. 3,50,000,00 .. 2,67,520.00

2. Ninety five PL-480 schemes out of its share of Rs. 10,50,000.00 ..

(*a*) Fifty three shecmes of Thatta Sub-division. 5,19,950.00

(*b*) Forty two schemes of Shahbunder Sub-division. 5,30,000.00

	10,49,950.00
balance ..	5000
Total ..	10,50,000·00

III. ALLOCATIONS TALUKAWISE.

(A) *Thatta Subdivision.*

(*i*) Taluka Taatta.	2,57,200.00
(*ii*) Taluka Mirpusakro	1,72,3500-00
(*iii*) Taluka Ghorabari	90,400.00
	5,19,950.00

(B) *Shahbunder Sub-division.*

	Rs.
(*i*) Taluka Sujawal.	2,05,00 0.00
(*ii*) Taluka Mirpur bathoro.	1,02,500.00
(*iii*) Taluka Jati	1,02,500.00
(*iv*) Taluka Shahbunder.	36,000.00
	5,30,000.00

APPENDIX-II

PROPOSALS FOR THE THIRD FIVE YEAR PLAN FOR THE DEVELOPMENT OF THATTA DISTRICT.

I-INDUSTRIES.

(1) *Sugar Factory.*

Sugar Factory is very necessary for this district as sugar cane can be grown here both in Thatta and Shahbunder sub-divisions. The Sugar Factory should be located at Ghulamullah.

(2) *Industrial Estate.*

Industrial Estate should be sanctioned for this disrict to be located at Thatta.

(3) *Glass Factory at Jungshahi (Taluka Thatta).*

A Glass Factory already existed here in the pre-partition. days but after the exodus of Hindus, it was abondoned. The raw materials for glass works will be available here in abdunance.

(4) *Ice Factory.*

An Ice Factory should be located at Thatta . There is no Ice Factory in this sub-division.

(5) *Cold Storage for Fishes.*

Cold Storage for Fishes should be located in Jungshahi. Fishes are available in great quantity and a Cold Storage will be a boon for the fish inndustry of the district.

(6) *Paper Mill at Pir Phato (Taluka Ghorabari).*

Pir Patho village is rapidly growing in importance and a paper mill at this place will be quite suitable as raw materials required for this industry are available.

(7) *Leather Industry at Sujawal.*

This industry should be located here as raw material are available in abundance.

II-COMMUNICATION.

(1) *Roads.*

1. Pucca road Mirpursakro to Ketibunder via Garho (36 miles).
2. Pucca road Mirpur bathoro to Jati(18 miles).
3. Pucca road Darro to Belo (10 miles.
4. Pucca road Belo to Mirpurbathoro (10 miles).
5. Pucca road Darro to Bano (10 miles).
6. Pucca road Chuharjamali to Ladium (7 miles).
7. Pucca road Ladiun to Giand Zangejo (22 miles).

(2) *Railways.*

1. Thatta to Jungshahi.
2. Thatta to Sujawal.
3. Tando Muhammad Khan to Mirpurbathoro.

4. Mirpurbathoro to Sujawal.

5. Sujawal to Jati.

6. Jati to Badin.

(3) *Telephones.*

1. Increase in number of lines at Thatta and Makli Mills.

2. Extension of telephone lines in Mirpursakro town where there is already a public call office.

3. Telephone exchange at Gharo, Ghorabari, Jungshahi, Ghulamullah, Jati, Chuharjamali, and Darro.

4. Public call office at Ladiun, Ketibnuder, Belo and Jherruck.

(4) *Telegraph office.*

Telegraph offices at Kotri Allah Rakhio Shah and Jati which are both Taluka Headquarters, and Chuharjamali, Darro and Jhoke Sharif.

(5) *Post Offices.*

Post Offices at Gharo, Ketibunder, Kotri Allah Rakhio Shah, Ghulamullah, Jherruck, Jhimpir, Pir Patho, Var, Giand Zangejo, Bano, Tarkhoja, Gujo, Gul Muhammad Baran, Shahbunder, Budho Talpur and Babra.

Full time post office be opened where there are already part time post offices.

III—POWER.

1. Twenty four hours electricity at Sujawal, Mirpurbathoro, Darro, Jati, Chuharjamali, Mirpusakro, Gharo, Jungshahi and Jherruck.

2. Extension of Sui Gas from Jungshahi to Thatta, Makli Hills and Ghulamullah for domestic and industrial use.

IV-IRRIGATION.

1. Humbas dam at Mahal Ketibunder, which will irrigate about seven thousand acres of land.

2. Providing sweet water for right bank in Thatta sub-division by connecting lower Kalri with upper Kalri feeder.

3. Extention of machki dam at Roro which will irrigate seventy-five acres of agricultural sweet land.

4. Providing water for Jhimpir and Jherruck Union Councils from upper Kalri feeder which will irrigate about eighty acres of agricultural land.

5. Utilization of Kalri feeder water from Puricha regulator through filter injection channel, Bijora Union Council.

V-AGRICULTURE AND ANIMAL HUSBANDARY.

1. Grain stroage in each Union Council.

2. Expansion of Poultry Farm at Jhimpir.

3. Veterinary dispensaries in all the taluka headquarters except Thatta, Sujawal, Mirpurbathoro and Jati, where already existing and veterinary dispensaries at Darro, Belo, Gharo, Jungshahi and Jhmipir.

VI—EDUCATION

1. Raising of Intermediate College to a Degree College at Thatta, both in Arts and Science.

2. Opening of Commerce Classes at Intermediate College, Thatta.

3. Construction of Hostel building at Makli Hills for Government College, Thatta.

4. Opening of an Intermediate College at Sujawal.

5. Opening of High Schools at Chuharjamali, Ghulamullah, Jati, Darro and Gharo.

6. Construction of High School building at Jungshahi.

7. Expansion of High School building at Mirpursakro.

8. Construction of High School building at Makli Hills.

9. Upgrading of atleast twenty-five Primary Schools to Middle Schools.

10. Opening of Girls High School at Sujawal and Filter Plant, Gharo.

11. Construction of existing Middle and Primary School buildings for both boys and girls, where new buildings are not existing.

12. Opening of Adult Education Centre in each Union Council.

13. Opening of Ladies Industrial Training Centre at Makli.

14. Opening of Social Welfare and Civil Defence Training Centre at Makli.

15. Opening of a Public Library at Makli Hills.

VII—HEALTH

1. Opening of five Rural Health Centres and twenty-four Sub-Centres.

2. Opening of Tuberclosis Sanitorium at Jehrruck.

3. Taking over of the Makli Hills Tuberclosis Clinic by the Government.

4. Expansion of Civil Hospital, Thatta by increasing the number of beds, appointment of a Dentist, Ear, Nose, Throat, Eye Specialists, Radiologist, Anaesthasis and Pathologist.

5. Opening of Compounders Training Centre in Civil Hospital, Thatta and Hospital at Sujawal.

6. Air Conditioning of the Civil Hospital, Thatta.

7. Air Conditioning of Operation Theatre at Hospitail, Sujawal.

8. Eight 'D' type bungalows for Matron, Pathologist, E.N.T. Specialist, Anaesthasist, Dental Surgeon, Eye Specialist, Radiogist and Lady Doctor, of Civil Hospital, Thatta.

9. Three 'I' type quarters for Assistant Medical Officers of Civil Hospital, Thatta.

10. Four 'II' Type quarters for Technicians of Civil Hospital, Thatta.

11. Six paying wards for Civil Hospital, Thatta.

12. *Musafirkhana* for the relatives of the patients of twenty rooms including lavotory block, at Civil Hospital, Thatta.

13. Radium and deep X-Ray theray and short wave thrapy centres, at Civil Hospital, Thatta.

14. Additional ward for twenty-six patient at Civil Hospital, Thatta.

15 One 'D' type bungalow for Matron at Sujawal Hospital.

16. Nursing Hostel for Civil Hospital, Thatta.

17. Construction of residential accommodation for Assistant District Health Officers with all the Rules Health Centres.

VIII—BUILDING.

1. Completion of the second phase of Makli township which should include office and residential accommodation for all departments.

2. Construction of Deputy Collector's residential bungalow at Sujawal.

3. Construction of Treasury Office and Revenue/Criminal Record Room at Makli Hills.

4. Construction of Mahalkari office and Strong room at Ketibunder.

5. Construction of residential accommodation for all *Mukhtiarkars* and Mahalkaris in the district.

6. Construction of a Circuit House at Makli.

7. Construction of a Second Class Inspection Bungalows at Jungshahi. Gharo, Ladiun and Ketibunder.

IX—MISCELLANEOUS.

(1). Makli township.

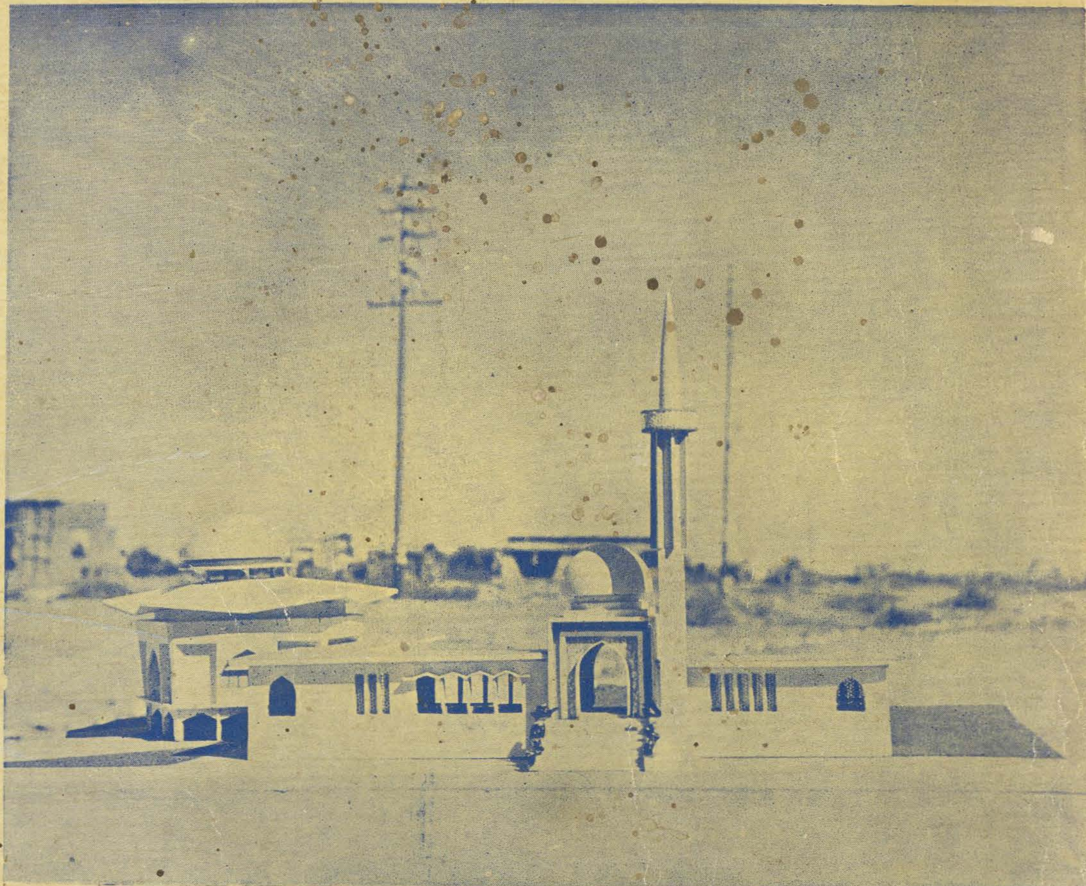
The Makli Hills should be developed into a first class tourist centre by opening twenty-four room Hotel-cum Restaurant, Trained tourist guides should be provided by Bureau of Tourism.

(2) Kalri Development.

The Committee for Kalri Development Board should be reconstituted and work started.

KARACHI: PRINTED AT THE WEST PAKISTAN GOVERNMENT PRESS.

(1 000)-6-64—III.



Model of Jama Masjid under construction at Makli

PRINTED BY G. A. MUJADDIDI, SUPERINTENDENT
WEST PAKISTAN GOVERNMENT PRESS
KARACHI